

ANIMAL KEEPERS' FORUM

QL
76
.A598
N2P



May 2011

The Journal of the American Association of Zoo Keepers, Inc.

ANIMAL KEEPERS' FORUM, 3601 S.W. 29th St., Suite 133, Topeka, KS 66614-2054

Phone: (785) 273-9149 FAX (785) 273-1980

May 2011

Vol. 38, No. 5

AKF Managing Editor: Susan D. Chan • **Associate Editors:** Becky Richendollar, North Carolina Zoo • Mark de Denus, Winnipeg, MB • **Enrichment Options Column Coordinator:** Julie Hartell-DeNardo, Oakland Zoo and Ric Kotarsky, Tulsa Zoo & Living Museum • **Legislative/Conservation Outlook Column Co-Editors:** Becky Richendollar, North Carolina Zoo and Greg McKinney, Philadelphia, PA • **Reactions Column Coordinator:** William K. Baker, Jr., Rockwall, TX • **ATC Column Co-Editors:** Angela Binney, Disney's Animal Kingdom; Kim Kezer, Zoo New England; Jay Pratte, Omaha's Henry Doorly Zoo • **Conservation Station Coordinator:** Amanda Kamradt, New England AAZK Chapter • **Proofreader:** Barbara Manspeaker, AAZK Administrative Office.

Animal Keepers' Forum is published monthly by the American Association of Zoo Keepers, Inc., 3601 S.W. 29th Street, Suite 133, Topeka, KS 66614-2054. Ten dollars of each membership fee goes toward the annual publication costs of Animal Keepers' Forum. Postage paid at Topeka, KS.

AAZK Executive Director: Ed Hansen, AAZK, Inc., Topeka KS

also serves as AAZK Liaison to the American Zoo & Aquarium Association (AZA)

AAZK Administrative Secretary: Barbara Manspeaker, AAZK, Inc., Topeka, KS

BOARD OF DIRECTORS

Shane Good, Cleveland Metroparks Zoo, Cleveland, OH 44109

President

Bob Cisneros, San Diego Zoo, San Diego, CA 92112-0551

Vice President

Tammy Root, Indianapolis Zoo, Indianapolis, IN 46222

Gisela Wiggins, North Carolina Zoo, Asheboro, NC 27205-1425

Penny Jolly, Disney's Animal Kingdom, Lake Buena Vista, FL 32830-1000

COMMITTEES/COORDINATORS/PROJECT MANAGERS

By-laws

Chair - Ric Kotarsky, Tulsa Zoo

Ethics

Chair - Bob Cisneros, San Diego Zoo

Grants Committee

Chair - Shelly Roach, Columbus Zoo

Awards

Chair - Janet McCoy, The Oregon Zoo

Behavioral Husbandry Committee

Chair - Deana Walz, The Living Planet Aquarium

Professional Development

Melaina Wallace, Disney's Animal Kingdom

Conservation Committee Chair

Amanda Kamradt, New England AAZK Chapter

ICZ Coordinators

Shane Good, Cleveland Metroparks Zoo
and Norah Farnham, Woodland Park Zoo

Bowling for Rhinos - Coordinator - Patty Pearthree, Cary, NC

Media/Website

Denise Wagner, The Phoenix Zoo, Project Manager

Products and Membership

Jacque Blessington, K.C. Zoo, Project Manager

Conferences

Ed Hansen, Tucson, AZ

MEMBERSHIP SERVICES

Data Transfer Forms

Available for download at www.aazk.org

AAZK Publications/Logo Products/Apparel

AAZK Administrative Office/Topeka

or at www.aazk.org



printed on Recycled Paper

Table of Contents

About the Cover/Information for Contributors.....	186
Scoops & Scuttlebutt.....	187 - 188
From the President.....	189 - 190
Coming Events.....	192
AAZK Announces New Members.....	193
Training Tales (<i>Training the "untrainable bobcat" with Positive Reinforcement</i>).....	194 - 197
Call for Papers for Ungulate Dedicated Issue.....	198
Establishing a Conditioning Program for a Red-flanked Duiker to Determine and Monitor Pregnancy.....	199 - 202
Book Reviews (<i>The Great Penguin Rescue and A Pocket Guide to the Snakes of Kansas and Common & Scientific Names for NA Amphibians, Turtles, Reptiles and Crocodilians</i>).....	203 - 204
Enrichment Options (<i>Catering to the Preferences of 2.1 Sulawesi Macaques</i>).....	205 - 211
Call for Enrichment Papers.....	212
World Famous Cheetah Dies.....	213
Announcing Our Rewards Program.....	214
Viewpoint: The Good Zoo and Euthanasia.....	215 - 217
Conservation Station (<i>A First Hand View of How Zoos Are Making a Difference in East Africa</i>).....	218 - 221
Conservation/Legislative Update.....	223 - 225
Conference 2011/San Diego - Updates, New Information.....	GREEN INSERT



37th Anniversary - 1974 - 2011

MISSION STATEMENT

(Revised April 2009)

American Association of Zoo Keepers, Inc.

The mission of the American Association of Zoo Keepers, Inc. is to advance excellence in the animal keeping profession, foster effective communication beneficial to animal care, support deserving conservation projects, and promote the preservation of our natural resources and animal life.

*This month's cover features two Malayan Sun Bears (*Ursus Hedarctos malayanus*) drawn by Camille Dorian, a caretaker at Monkey Matters in San Diego, CA. This cover was produced from one of her photographs that she took into a computer graphics program where she created this artwork. The Malayan sun bear is the smallest member of the bear family. It is also the one with the shortest and sleekest coat - perhaps an adaptation to a lowland equatorial climate. Although they inhabit both lowlands and highlands, the Sun Bears are primarily forest dwellers. They rest and feed in trees in tropical to subtropical regions of Southeast Asia - Borneo, Sumatra, Malay Peninsula, Kampuchea, Vietnam, Laos, Burma, and possibly southern China. These animals grow to approximately four and a half feet in length and have a tiny, two-inch tail. Their average weight is less than 100 pounds. The short-haired, deep black or brown-black fur is interrupted on the chest by a pale orange-yellow horseshoe-shaped marking. In folklore, this yellow crescent is said to represent the rising sun and is apparently the origin of the name Sun Bear. They have a long narrow tongue which can be extended quite far. The long sickle-shaped claws on all four feet and the large, inward-oriented feet are most reminiscent of the sloth bear. Malayan Sun Bears are skillful climbers, a useful ability for a species which spends a lot of time climbing trees to get fruit. Malayan Sun Bears are omnivorous eating small vertebrates such as lizards and nesting birds and fruit. They are also very fond of honey. Sun Bears may mate at any time of year; they are thought to have only one mate. Two or three cubs are usually born after a gestation period of 96 days. The young, usually weighing 10-15 ounces each, are suckled for about 18 months. Females reach sexual maturity at about three years and males at four years. These bears live 25 to 28 years in captivity. Thanks, Camille!*

Source: http://www.honolulu.zoo.org/sun_bear.htm

Articles sent to *Animal Keepers' Forum* will be reviewed by the editorial staff for publication. Articles of a research or technical nature will be submitted to one or more of the zoo professionals who serve as referees for *AKF*. No commitment is made to the author, but an effort will be made to publish articles as soon as possible. Lengthy articles may be separated into monthly installments at the discretion of the editor. The editor reserves the right to edit material without consultation unless approval is requested in writing by the author. Materials submitted will not be returned unless accompanied by a stamped, self-addressed, appropriately-sized envelope. Telephone, fax or email contributions of late-breaking news or last-minute insertions are accepted as space allows. Phone 785-273-9149; FAX (785) 273-1980; email is akfeditor@zk.kscoxmail.com< If you have questions about submission guidelines, please contact the Editor. Submission guidelines are also found in the Members Only section of the AAZK website.

Deadline for each regular issue is the 10th of the preceding month.

Dedicated issues may have separate deadline dates and will be noted by the editor.

Articles printed do not necessarily reflect the opinions of the *AKF* staff or the American Association of Zoo Keepers, Inc. Publication does not indicate endorsement by the Association.

Items in this publication may be reprinted providing credit to this publication is given and a copy of the reprinted material is forwarded to the editor. If an article is shown to be separately copyrighted by the author(s), then permission must be sought from the author(s). Reprints of material appearing in this journal may be ordered from the editor. Regular back issues are available for \$4.00 each. Special issues may cost more.

E-Mail Addresses:

You may reach Barbara Manspeaker at AAZK Administrative Offices at: aazkoffice@zk.kscoxmail.com<

You may reach Susan Chan and *Animal Keepers' Forum* at: akfeditor@zk.kscoxmail.com<

Mailing Address:

AAZK, Inc., 3601 SW 29th St., Suite 133, Topeka, KS 66614-2054

AAZK website Address: www.aazk.org

BFR Website: <http://aazkbfr.org>

Scoops & Scuttlebutt



Board of Directors Election 2011 Update

The candidate profiles are now available for viewing in the Member's Only section of the AAZK website (www.aazk.org). The official voting period for Professional AAZK members began April 15th and runs through June 1st 2011. Results of the 2011 election for the AAZK Board of Directors will be announced after the verification of ballots, around June 10, 2011.

Only currently active AAZK Professional Members may vote in the Board of Directors election. In order to access online voting you **must** have established an account in the Member's Only section of this website. Verification of your membership and access to this section is given by approval from the Administrative Office once you have set up your account.

"Bowling For Rhinos" (BFR) Update from the Coordinator

I hope everyone will be out in full force raising money for BFR in 2011. We need your help to be successful! Never has there been a greater need for funds. An all out war is raging against poacher's ever-increasing threats to wildlife. Everyone has had to increase security to protect wildlife and this always means the need for more money. All three organizations supported by "Bowling For Rhinos" funds - "Lewa Wildlife Conservancy" (LWC), "International Rhino Foundation"(IRF) and "Action for Cheetahs"(ACK)-formerly called "Cheetah Conservation Fund - Kenya" need your support more than ever.

Our #1 BFR goal for 2011 is to have all 89 AAZK Chapters participate in "Bowling For Rhinos". Don't panic. If bowling is not the thing to do in your area, any type of fundraiser is welcome. Some Chapters have been very successful with "Wii® Bowling", "Run/Race For Rhinos", "Rummage For Rhinos", "Rockin' For Rhinos", "Sailing For Rhinos"...and the list goes on. All donations are, of course, always welcome and count as participation. Remember, it takes about five consecutive years for a fundraising event to catch on in your community so it is important to keep rolling with BFR in order to be successful.

Our #2 BFR Goal is to raise \$400,000 in 2011. If we increase the overall size of the "conservation pie" each of the organizations we support will receive a larger amount of money. It will be tough in this economy but all three organizations are also feeling the effects of the economy and are in need of extra support more than ever. During tough times, poaching pressure increases and the cost of protecting wildlife increases.

Please consider holding an event in 2011. Please send info on your event so I can update records with correct contact information ASAP to: Patty Pearthree, c/o BFR, 318 Montibello Dr., Cary, NC 27513; phone - 919-678-0449; email - ppear3@pear3.org; website - <http://aazkbfr.org>

Bowling for Rhinos Conservation Resource Fund Grant

The American Association of Zoo Keepers, Inc. (AAZK) is pleased to announce the call for proposals for the Bowling for Rhinos Conservation Resource Fund. This competitive grant is designed to fund projects focused on rhino conservation and research. Successful proposals will reflect AAZK values and meet award criteria in one of four categories:

- **Category I - In-situ Rhino Conservation and Research** - Short-term (less than one year), specific, field research projects on African or Asian rhino species conducted by an individual or organized group of individuals working under the auspices of a zoological facility, educational entity or AAZK Conservation Partner.

- **Category 2 - In-situ Community, Educational or Medical Programs (Africa or Asia)** - Community education, school support or medical programs developed or administrated by an individual working under the auspices of a zoological facility, educational entity or AAZK Conservation Partner restricted to the continents of Africa or Asia. Preference may be given to local programs established and/or administrated by LWC (Lewa Wildlife Conservancy), IRF (International Rhino Foundation) or ACK (Action for Cheetahs in Kenya) endorsed partners.

- **Category 3 - In-situ Species Conservation** - Short-term (less than one year), specific, field research projects on any species that shares the exact same ecosystem as: Asian, Java, Sumatran, and African Black or White rhino.

- **Category 4 - Ex-situ Rhino Conservation and Research** - Short-term (less than one year), specific, zoological research projects on African or Asian rhino species conducted by an individual or organized group of individuals working under the auspices of a zoological facility, educational entity or AAZK Conservation Partner. Researcher(s) must be able to demonstrate evidence of partnership with a rhino conservation entity operating in Asia or Africa combined with a tangible benefit to an in-situ conservation project.

Eligibility

Affiliation or partnership with AAZK is not required, but preference may be given to AAZK Members or Conservation Partners.

Applications are due no later than June 1st. Award announcements will be made on July 1. Application information is available on the AAZK website, www.aazk.org. Completed applications may be e-mailed to AAZK Conservation Committee Chair Amanda Kamradt at amanda.kamradt@aazk.org, or mailed to: Amanda Kamradt, Hooves and Horns, Franklin Park Zoo, 1 Franklin Park Road, Boston, MA 02121.

A Note from the AKF Editor on Schedule for Upcoming Issues

I wanted to make the membership aware of the schedule for the upcoming issues of *Animal Keepers' Forum*. Because I am going to have to undergo heart surgery in early May, the schedule I am hoping to be able to follow during my recovery period and time away from the office is as follows:

June 2011 Issue of AKF - It is my hope to have this issue ready to go in the mail by late May to the middle of June (the June issue would normally be mailed the last week in May). Note that this may mean some delay in receipt of your copy of the June issue as opposed to our regular mailing schedule.

July/August 2011 Dedicated Issue of AKF - We have been planning for a number of months to produce a combined July/August issue dedicated to Ungulate Husbandry. I am working with the Ungulate TAG in the production of this special issue. It is my hope that this issue will be ready to go in the mail to you by the end of July or the first part of August.

These schedules are tentative (but hoped for) and will depend on how rapid my recovery from the surgery is and how soon I can be back in the office full-time. Your understanding and patience is greatly appreciated. ~ Susan Chan, AKF Editor



July 17 - 23, 2011

Starting Planning Now!

See helpful info at www.aazk.org

Look under "About Us" on the homepage.

From the President . . .

If you have been paying attention to the various publications of the regional zoo associations and the WAZA newsletters, you have noticed there is a new buzzword in the industry; Sustainability. The context in which our zoo associations are using the term sustainability is not related to “green living”, recycling, and LEED certifications. Rather, sustainability in our main lexicon refers to the zoological community’s recognized sense of urgency of ensuring the future viability of zoo and aquarium populations. Research indicates that zoo-based populations have declined in overall numbers over the past decade due mainly to low population sizes and poor demographics (Boyle, et al, 2011). Simply put, many of the species in our zoo animal collections are not being managed sustainably, failing to breed to replacement for multiple generations with appropriate levels of genetic diversity.

The Association of Zoos and Aquariums’ (AZA) Task Force on the Sustainability of Zoo-Based Populations identified several key factors that can collectively reduce population sustainability (Bonner, 2011):

- Lack of exhibit and breeding space
- Lack of husbandry expertise
- Overloaded population planning capacity
- Unnecessary complexity in population management administration
- Inadequate awareness at all levels related to sustainability issues
- A need for a stronger overall commitment to supporting sustainability outcomes
- Widespread difficulty in obtaining permits for acquiring and moving animals
- Dwindling staff expertise related to the husbandry of a broad range of species.
- A sense that we simply are not doing a good enough job of training the next generation.
- A need to treat all taxa the same

Obviously this crisis is troubling to a zoo keeper on many different levels. First, if the species that we work with are not being managed sustainably, then obviously our profession is jeopardized. If your passion is being an orangutan keeper, but orangutans cannot be managed sustainably into the future, you may not be an orangutan keeper for very long. Secondly, to continue with the orangutan example, if we cannot manage them sustainably in zoos where they are relatively safe, what does that say for their future in the wild? If we cannot adequately manage our *ex situ* conservation strategies, what does that say for our *in situ* strategies which are often much more complex? Finally, the very future of our zoos and aquariums, and our conservation education messaging, depends on our ability to showcase healthy groups of animals in natural settings. Declining populations and decreased genetic variability is a threat to our ability to achieve our mission.

Fortunately, the AZA Sustainability Task Force has some recommendations for addressing sustainability in our animal populations (Boyle et al, 2011):

- Increased training opportunities
- Increased space for animal holding and breeding
- Increased population planning capacity
- Increased training on permit application writing
- Development on program leader succession planning

Overall, I think the regional associations and WAZA have a very sound strategy for moving forward, and I agree with all of their points included in the various publications that I have read. Here's the one problem I have: In none of the publications that I have read is there a single mention of zoo keepers or aquarists, the staff who work with these animal collections every single day, and have the most daily contact with these species. Sure the publications mention "staff" and they cannot mention every single classification or worker that may be employed in a zoo's animal care department. But keepers and aquarists spend their entire work day with these animals, and it is my contention that the successes related to the sustainability of our collections are often the result of the daily husbandry and observations of our keepers and aquarists.

Providing more space for naturally-sized groupings of species, with natural sex ratios, in the most natural environments as possible will go a long way in improving reproduction. Better science works great in some situations and talking about AI, cryopreservation of gametes, and embryo transfer sounds interesting, but the average zoo in the world doesn't have the staff and the resources for it. For generations, the most reliable way to get animals to successfully reproduce was by having dedicated staff (zoo keepers) paying attention to and observing the natural behaviors, reproductive cues, and subtle clues of animal husbandry that only comes with dedicated observation and experience. This remains true to this day. Zoo keepers and their professional associations need to be part of the decision making process in addressing sustainability in animal collections because their daily activities are an essential part of the programs' success.

The leaders of the regional zoo associations and WAZA speak of collaboration amongst the regional zoo associations, zoos, aquariums, and academic communities. I urge them not to forget the American Association of Zoo Keepers (AAZK), the other eight professional zoo keeper associations of the world and the International Congress of Zookeepers (ICZ). Collectively, our nine zoo keeper associations and 6000 members' impact on animal husbandry, conservation, and educating zoo visitors is tremendous. Together with AZA, WAZA and the other regional zoo associations of the world we can solve the sustainability crisis facing our animal collections.

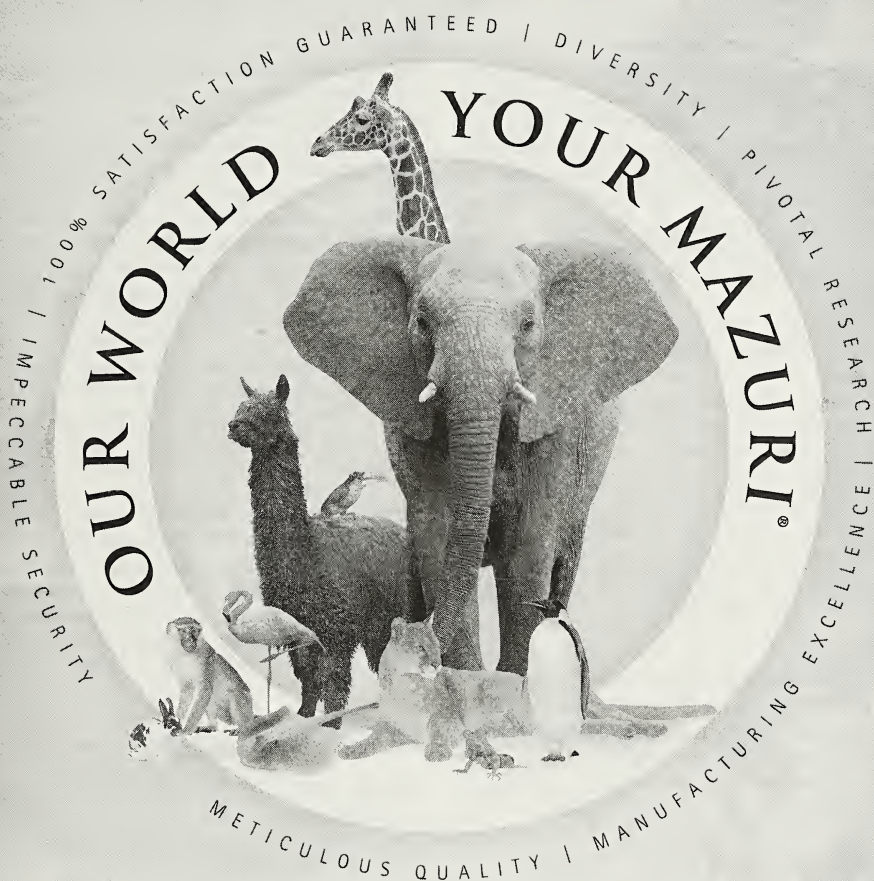
References

- Bonner, Jeffrey. 2011. Vision and Future of Zoos. WAZA News. January. Pp. 2-4
Boyle, P., Andrews, B., Dorsey, C., Fouraker, M., Pate, D., Reed, M., & Wiese, B.
2011. Building Sustainable Zoo Populations. Connect. January. Pp. 10-13.



Shane Good, AAZK President
Cleveland Metroparks Zoo
Cleveland, OH





We're evolving the new generation of exotic animal nutrition. Today, Mazuri offers food products for more animal species than any other company in the world. For over 20 years, we've worked in collaboration with world-class zoos, aquariums, owners & breeders around the globe to develop the highest quality product for your animals. Trust in the security of Mazuri for the health and longevity of your exotic animal.

Mazuri®
The Exotic Animal Feeding Resource

WWW.MAZURI.COM

Coming Events

Post Your Coming Events Here
email to: akfeditor@zk.kscoxmail.com

May 15-18, 2011 - 2011 Rhino Keeper Workshop. To be held at Fossil Rim Wildlife Center, Glen Rose, Texas. For further info contact: adam.felts@columbuszoo.org

June 13-16, 2011 - 7th International Zoo & Aquarium Marketing Conference - Hosted by the WAZA and the Granby Zoo in Granby, Quebec, Canada. Theme for the conference is "Strategic Marketing in Action". The program will address the following topics: Strategic Marketing, Marketing the Zoo & Aquarium Community, Marketing, Education and Conservation, Turn Bad News into Good News, and Social Marketing in Action. See www.zoodegranby.com/waza for further information.

July 20-23, 2011 - Biology of Rattlesnakes Symposium - To be held at the University Park Marriot in Tucson, AZ. Hosted by the Chiricahua Desert Museum and the Arizona-Sonora Desert Museum. People interested in presenting papers should contact Lori King Palmer at loriguanid@aol.com. Those interested in presenting posters contact Matt Goode at mgoode@ag.arizona.edu. For registration information, current list of speakers and other details, please go to www.biologyoftherattlesnakes.com

July 25-30, 2011 - The First-ever Joint Meeting of the International Ethological Conference (IEC) and the Animal Behavior Society (ABS). To be held at Indiana University, Bloomington, Indiana, USA. More information can be found at the conference website: <http://www.indiana.edu/~behav11/index.shtml>. The program will be exciting and integrative scientific that draws on the strengths of both the IEC and the ABS.

August 14-19, 2011 - The 10th International Conference on Environmental Enrichment. Hosted by the Oregon Zoo and the Oregon National Primate Research Center, OHSU. Theme: "Meeting of the Minds: Working Together to Enrich the Lives of Animals". For more information please contact icee:2011@hotmail.com

August 24-28, 2011 - AAZK National Conference. In San Diego, CA. Hosted by the San Diego AAZK Chapter and the Zoological Society of San Diego. See <http://sdaazk.com> for information.

October 1-5, 2011 - 30th Annual Conference of the Association of Zoological Horticulture (AH). Hosted by the Sedgwick County Zoo, Wichita, KS. Theme: "Bringing the World to the Plains". Seminars and workshops covering a wide range of topics involving Horticulture, Integrated Pest Management, Conservation and Exhibit

Design will be presented. Participants within the Horticulture, Arboriculture and Grounds Maintenance fields are encouraged to attend. For information call 316-266-8313, 316-266-8314 or visit AZH.org.

October 6 - 9, 2011 - Advancing Bear Care 2011 To be held in Banff, Canada. Bear biologists and naturalists will lead hikes into bear habitat and interpret for delegates how bears use the components of the ecosystem to express their daily and seasonal routines. We will bring this information back into workshops and apply this knowledge towards improving captive bear husbandry. Also, international bear biologists will assist us in interpreting Asian, European, and South American bear habitats. Conference updates will always be posted on the Bearcare Yahoo Group list serv <http://ca.groups.yahoo.com/group/bearcare/> You will be able to advertise your need for roommates, rides, conference questions etc. on this list serv. To join just send an email to bearcare-subscribe@yahoogroups.ca

October 6-9, 2011 - 32nd Annual Elephant Managers Association Conference - Hosted by the Seneca Park Zoo, Rochester, NY. The pre-conference trip will be hosted by Lion Country Safari in Cambridge, Ontario on Wednesday, October 5th (Passport needed to participate in this trip).

2012

August 8-14, 2012 - The World Congress of Herpetology - To be held in Vancouver, Canada. For more information see <http://www.worldcongressofherpetology.org/>

September 9-13, 2012 - 4th International Congress on Zookeeping - Sponsored by Wildlife Reserve Singapore/Singapore Tourism Bureau. Theme: "Many Voices, One Calling". For info on sponsorship or exhibit opportunities email eo@aszkg.org.au. Check the ICZ website <http://www.icz.org/> for latest news/information.

September 23-27, 2012 - AAZK National Conference - Hosted by the Rosamond Gifford Zoo and the Rosamond Gifford Zoo AAZK Chapter in Syracuse, NY. For information on upcoming AAZK conferences, watch the AAZK website at www.aazk.org

2013

September 22-26 2013 - AAZK National Conference - Hosted by the North Carolina Zoo and the North Carolina AAZK Chapter

AAZK Announces New Members

New Professional Members

Kimberly Van Wormer, **Beardsley Zoo (CT)**; Lauren Hinson, **Lionshare Zoo (CT)**; Parker Space, **Space Farms Zoo & Museum (NJ)**; Laura Erbeling, **Cape May County Zoo (NJ)**; Jason Castro and Brandon Casey, **Bronx Zoo (NY)**; Callin Rous, **Utica Zoo (NY)**; Ashley Markewinski, **Living Treasures Animal Park (PA)**; Melissa Giordano, **Philadelphia Zoo (PA)**; Matthew Neff, **National Zoological Park (DC)**; Steve Gott, **Jacksonville Zoo and Gardens (FL)**; Tyler Eads, **Birmingham Zoo (AL)**; Kate Meinhardt and Meghann Sachs, **Nashville Zoo (TN)**; Wendy Rice, **Memphis Zoo (TN)**; Ashley Wright, **Columbus Zoo & Aquarium (OH)**; Keenan McCormick and Amanda Jones, **Detroit Zoo (MI)**; Rebecca Olejownik, **Binder Park Zoo (MI)**; Bill Flanagan, **Lincoln Park Zoo (IL)**; Rachel Meili, **Lake Superior Zoo (MN)**; Jennifer Esler, **Grizzly & Wolf Discovery Center (MT)**; Alison Marancik, **Tanganyika Wildlife Park (KS)**; Leah Daigle and Brittany Dyess, **Zoo of Acadiana (LA)**; Debra Parsons-Drake, **Humane Society of the United States (TX)**; Emily Merola, **Utah's Hogle Zoo (UT)**; Allyce Lindner, **Tracy Aviary (UT)**; Valerie Salonga, **The Living Desert (CA)**; Hollis Ferguson, **Happy Hollow Park & Zoo (CA)**; Christine M. Kehlor, **Honolulu Zoo (HI)**; Marisa Scrilatti, **Biodome de Montreal (Quebec, Canada)**; Brendan Linnell and Jeff Young, **MetroToronto Zoo (Ontario, Canada)**. *(We do not publish the names of new and/or renewing members who do not list their facility on their membership application/renewal. There were two in May.)*

New Institutional Members

Chattanooga Zoo, Chattanooga, TN
Dardenelle Long, Director

WildCat Haven, Inc., Sherwood, OH
Cheryl Tuller, Executive Director & Co-founder

New Commercial Members

Animal Source Texas, Inc., Krum, TX
Martin Davey, Owner

Renewing Institutional Members

Tregembo Animal Park, Wilmington, NC
Sherry Tregembo, Owner/Operator

McCarthy's Wildlife Sanctuary, Inc.,
West Palm Beach, FL
Mark McCarthy, Director

Chicago Zoological Society, Brookfield, IL
Dr. Stuart D. Strahl, President & CEO

Saint Louis Zoo, Saint Louis, MO
Jeffrey P. Bonner, President

Kansas City Zoo, Kansas City, MO
Randy Wisthoff, Director

In-Sync Exotics, Wylie, TX
Vicky Keahey, President

Phoenix Zoo, Phoenix, AZ
Bert Castro, Director

Moonridge Animal Park, Big Bear Lake, CA
Debbie Richardson, Curator

Wild Things, Inc., Salinas, CA
Charlie Sammut, Owner

Oregon Zoo, Portland, OR
Chris Pfefferkorn, General Curator

Cougar Mountain Zoo, Issaquah, WA
Robyn Barfoot, General Curator/Zoo Manager

Woodland Park Zoo, Seattle, WA
Deborah B. Jensen, PhD, President & CEO

Point Defiance Zoo & Aquarium, Tacoma, WA
Gary Geddes, Director

Renewing Commercial Members

Mazuri Diets/Purina Mills, Gray Summit, MO
Tracy Wheeler

Renewing Contributing Members

Donna M. Graham, Dayton, OH
Thomas C. Roy, Southfield, MI
Ron Manseau, Detroit, MI



**THE
GOURMET
RODENT,
INC.™**



RATS AND MICE

Bill & Marcia Brant

P.O. Box 430
Newberry, FL 32669-0430

(352) 472-9189
Fax: (352) 472-9192
e-mail: GrmtRodent@aol.com

The AAZK Behavioral Husbandry Committee Presents

Training Tales...



Where you can share your training experiences!

*Training Tales Editors – Jay Pratte, Omaha’s Henry Doorly Zoo;
Kim Kezer, Zoo New England; and Angela Binney, Disney’s Animal Kingdom*

Training the “untrainable bobcat” with Positive Reinforcement

By

*Melissa Anderson Proffitt, Animal Keeper
The Boonshoft Museum of Discovery, Dayton, OH*

Introduction and Background

Madison, an 11-year-old female bobcat (*Lynx rufus*), has lived at the Boonshoft Museum of Discovery since 1999. As she matured, she developed an aggressive and mistrustful attitude towards keepers. She also was wary of any changes around her. Repeated past attempts to train Madison to crate and shift into a holding cage were unsuccessful, mainly due to a lack of training consistency. Ultimately, Madison did not learn the behavior. She would not enter her holding cage if the keeper was present and would leave her back foot extended out of the cage so the keeper could not secure her in the cage by the shift door. Many on the keeping staff became discouraged because they could not train her to offer these behaviors voluntarily.

Upon renovation of the Discovery Zoo at the Boonshoft Museum in September of 2010, Madison’s observed behaviors were taken into consideration, and the design of the new holding cage better facilitated training of the two behaviors. Since keepers had noted that Madison was more comfortable at higher levels in her exhibit, a bi-level holding cage was constructed. The new crate is now located on the top level in such a way that keepers can easily remove the crate safely after closing Madison into it. Being a fairly new keeper on staff and having the least history with Madison, and since Madison should not have any negative associations with the new holding

cage, I wanted to take this opportunity to re-introduce her to the concept of willingly shifting into a holding cage. With the approval of curatorial staff, I developed a new training plan to build a positive association for Madison with shifting into the holding cage and entering the crate so keepers could pull her off exhibit, enter, and clean the exhibit safely.



The holding cage and crate setup for the bobcat
(Photo courtesy of Melissa Proffitt, Boonshoft Museum of Discovery)

Training Plan

Because of her wariness of keepers, we decided we should have one trainer work with Madison to the point of completion of the behaviors, and then transfer it to other keepers. That way she could

build a relationship with one keeper at a time and the sessions would be consistent. The first goal was to have Madison enter the holding area by making the holding cage a special place for her. While previously she had 24-hour access to her holding area, we decided to limit her access to the new holding cage and only make it available to her during feeding times. The next was to reinforce her for entering the holding cage through multiple small approximations or simple behaviors that lead up to the final behavior (Stafford, 2007). After that, we wanted to have her enter her crate (located in the holding cage) and remain calm while closing the shift door (a guillotine-style door on pulley system) to the holding cage.

Successes and Learning Curves

The biggest obstacle to overcome in Madison's training was the first obstacle; how to get Madison to even come over to the holding cage when a keeper was present in the holding room. This took quite a bit of quiet patience of just sitting in the holding room next to the holding cage waiting on the bobcat to enter. I knew I would have to start with very low criteria of response time and duration during these initial desensitization sessions. Using a verbal bridge of "GOOD", first I would reinforce her for just coming over to the shift door and not actually coming into the holding cage. Then I would reinforce her for placing a front paw into the holding cage. The first time she entered fully into the holding cage she was jackpotted with chicken liver. However, when she would go over to her food bowl she would grab a large chunk of her carnivore diet and run back out into the exhibit. I did not want her reinforced for leaving the holding cage so I started breaking up her diet into small pieces and scattering them around the holding cage. This way she quickly tired of going in and out of the holding cage to eat and after only a couple sessions started to settle down and eat inside the holding cage with the keeper present in the holding room.



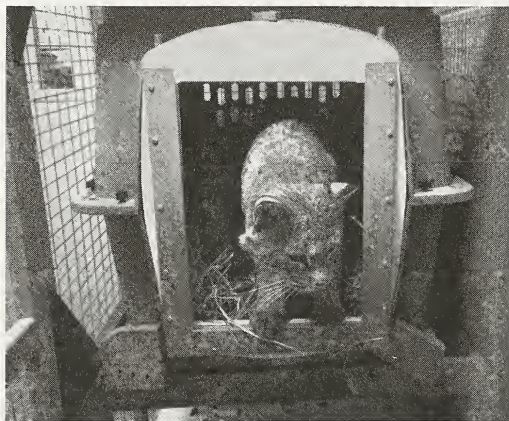
Madison entering holding cage through shift door
(Photo courtesy of Melissa Proffitt, Boonshoft Museum of Discovery)

Once she was comfortable entering the holding cage with the keeper present, my goal was to decrease her response time and add a verbal and visual cue for Madison to enter the holding cage. I started by simply saying the word "IN" every time she entered the holding cage, and pointing with my right index finger across my chest into the holding cage. I also raised the criteria for reinforcement by shortening the window of opportunity in which to enter the holding cage when I opened the shift door. I started by giving Madison three minutes to enter because of her suspicious nature. After just two weeks, we were down to one minute, and usually did not need it because she would come over as soon as I raised the shift door and gave her the cue. While her progress in just a few weeks was very promising, the hard part was yet to come!

Even though Madison was growing comfortable being in the holding cage in the presence of a keeper, she would still bolt out of the holding cage anytime there was a movement or sound. So I ever so slowly started to make small changes to my location in the holding room, make small sounds like rustling my keys, and then reinforcing her every time she decided not to leave the holding cage. Eventually, my shuffling around the holding area outside of her holding cage did not bother her at all. At this stage, I was not asking Madison to enter her crate on the higher level of her holding cage yet. Madison decided to make this transition herself. True to what the keepers had observed, Madison started jumping up into the crate on her own seeming to want to be at a higher vantage point. I took

advantage of this offered behavior and started placing her diet in the crate instead of at the back of the holding cage as I had been doing. Then I started pairing the verbal cue "CRATE" with the action of her jumping into the crate. So far, everything was still going smoothly, until I wanted to start lowering the shift door.

Anticipating that this would be the hardest aspect of this behavior for Madison, due to past experiences when she had been baited and then trapped in her holding cage, my plan was to use very small approximations of lowering the door only marginally until it was finally all the way down. The first



Madison in crate.

(Photo courtesy of Melissa Proffitt, Boonshoft Museum of Discovery)

approximation went well; I simply touched the pulley handle and let Madison hear the metallic sound it made when moved. After all the key jingling I had done, this did not even peak her interest. However, as soon as that shift door moved a centimeter, she shot out of the crate and holding cage like a rocket! Then she did not even come into the holding cage at all for two days if a keeper was in the holding area. I realized that I needed to back up and start reinforcing her for simply approaching the holding cage again. After some baiting and a lot of waiting, Madison was coming back over and putting her head into the holding cage while I was there. So I tried a new tactic. With Madison on the outside of the holding cage, still in her exhibit, I would move the shift door in small movements up and down. Because

Madison knew she was not being trapped in the holding cage, she instead stayed right by the shift door, smelling and investigating it as it moved. Curiosity seemed to be winning over fear. After a few sessions like this, I opened the shift door, cued Madison inside her holding cage, and stepped back from the pulley. Madison came right in and then jumped in her crate after I gave her the cue to "CRATE". I breathed a sigh of relief, and then went back to the task of baby-stepping Madison to accept the closing of the shift door. The next time that I attempted to move the shift door just a few centimeters closed, Madison initially jumped out but then instantly came back to smell the door. Holding the shift door where it was, I re-cued Madison to enter the holding cage and jackpotted her response. The next session she had an even more diminished reaction to the shift door slightly moving, simply sticking her head further out the crate to look at the door but making no attempt to exit. Over the next couple of weeks, not wanting to rush through any approximations, I inched the shift door almost all the way closed with Madison remaining in her crate in the holding cage.

Now came the moment of truth: shutting the shift door completely. Even though Madison was tolerant of the door closing most of the way without much reaction, she certainly reacted when it made the soft thud and blocked her entire view of the exhibit. She immediately jumped out of the crate and put her face to the shift door, so I opened it. It was important that Madison not feel trapped but be confident that she had some control over when the door opened/closed. The first time she ran right out of the holding cage and once again, we had to back up a few approximations. The second time she just watched as the door shut and as soon as it did I jackpotted her and then opened the door again. This time instead of exiting right away, she simply went back to eating. Eventually, I was able to close the shift door while she ate her breakfast, enter and the clean her exhibit, and then release her back onto exhibit. I could tell by Madison's body language that the more we worked on these behaviors the more comfortable she was getting with the whole routine.

Conclusion

While Madison still has her occasional days when some minute change only she seems to notice will

put her on edge, she is successfully shifting off exhibit over 90% of the time. All of us in the Live Animal Department at the Boonshoft Museum of Discovery are very pleased with her progress. I am very confident that this experience has laid the foundation for future training success with Madison. She is not only learning the requested behaviors, but is also learning to have a positive relationship with her keepers, her overall stress levels seem drastically reduced, and keepers can now more safely and efficiently manage her care. After almost a decade of attempts, in the end six months of consistent positive reinforcement training does not seem too bad to train the “untrainable” bobcat!

Acknowledgements

Being a novice trainer in the zoological field, I am very thankful to the multiple fellow trainers who helped me develop this training plan. I especially want to thank Grey Stafford, PhD for generously answering numerous questions through multiple emails and discussions. I also want to thank the rest of the Live Animal Department at Boonshoft Museum for supporting this effort: Curator Mark Mazzei, Associate Curator Liz Toth, Assistant Curator Heather Ray, Animal Keepers Steve Mallory, Tony Accroco, and Dawn Kirchner, and Animal Presenter Mary Bauer. But overall my biggest teacher was Madison herself. Without paying attention to the information she was communicating to me, and tailoring my approach from that information, we never would have been able to do it!

References

Stafford, G. 2007. *ZOOMility: Keeper Tales of Training with Positive Reinforcement*.
iReinforce.com

BHC Comments by Angela Binney:

I love this paper! Melissa, thank you so much for sharing your process and your success. Too often we give up on the more challenging projects, after failed attempts (for whatever reason), thinking the animal is untrainable or the process is just too hard or not worth the time or effort. Crate training a shy, elusive animal that does not want to be trapped (or has a negative association with the crate) can prove to be very challenging on all levels. By taking this project on, you were not only working against the natural tendencies of the bobcat, but un-training negative associations developed in her history. Kudos to you for giving the program some fresh thought, research, consistency, and most of all patience. If you continue training with the same level of focus and attention to detail I predict you will have a many more success stories to share. We look forward to hearing about them in Training Tales!

Big Cat Internships Available

Join us in
“Saving Tigers One by One”



As seen on Animal Planet®
“Growing Up Tiger”

Apply at: www.tigercreek.org



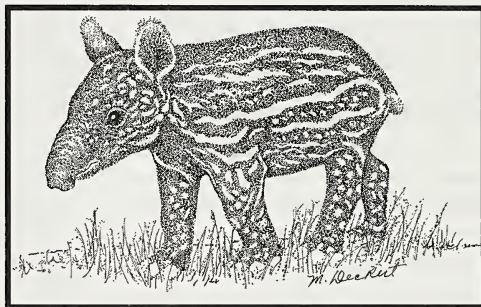
Learn about Big Cat Management. Internship involves Animal Care Apprentice and Public Education. We offer experience that counts towards employment.

TIGER MISSING LINK FOUNDATION / TIGER CREEK WILDLIFE REFUGE

CALL FOR PAPERS FOR DEDICATED ISSUE OF AKF - UNGULATES

We are planning on producing a combined July/August 2011 edition of *Animal Keepers' Forum* dedicated to ungulates. We will be working with the Ungulate TAGs in producing this dedicated issue. We would like those interested to submit manuscripts for consideration for inclusion in this dedicated issue. Possible topics might include the following:

- Ungulate Care and Management
- Managing multi-species habitats
- Managing single-sex herds
- Ungulate Hand-rearing
- Ungulate hoof care
- Ungulate operant condition
- Ungulate Enrichment



Papers should be submitted electronically in MS Word only to akfeditor@zk.kscoxmail.com. Please use Times or Times New Roman font (10pt text body). Please put "Ungulate Issue" in the subject line. Papers should be no more than 10 pages in length. Any charts and/or graphs should be submitted as separate jpg or tif files along with (but not imbedded in) the manuscript. We also encourage photos of your animals to include and these should also be submitted electronically as either high-resolution (minimum 300 dpi) jpg or tif files.

If you cannot submit your material electronically, you may submit your materials on a disk or CD sent to: Ungulate Dedicated Issue, AAZK, Inc., 3601 SW 29th St., Suite 133, Topeka, KS 66614-2054. If you cannot submit photographs electronically, you may send 3 x 5 inch prints to the same address. You should include proper photo credit for each photo and also suggested captions for each photo submitted.

Be sure to also include your complete contact information including name, address, email and a daytime phone where you may be reached if we have questions concerning your submission. Also be sure to include your facility and your job title at that facility.

**Deadline for submission of articles for consideration for this special
Ungulate Issue is May 15, 2011.**

Establishing a Conditioning Program for a Red-flanked Duiker (*Cephalophus rufilatus*) to Determine and Monitor Pregnancy

By Kim Wanders*, Keeper III, Jacque Blessington, Keeper III
Kansas City Zoo, Kansas City, MO

Abstract

There are ~20 species of duikers¹. The Red-flanked duiker is a medium-sized duiker that is found naturally in western and central Africa. From the 2006-2007 Association of Zoos and Aquariums (AZA) Population Management Plan (PMP), there were 27.22 individuals at 17 institutions.

In 2007, the Kansas City Zoo housed 1.1 Red-flanked duikers. Lil, the female, was born at the Kansas City Zoo on 30 September 2004. Alfalfa, the male, was born at the San Diego Zoo and was brought to Kansas City on 17 November 2006 as a breeding recommendation from the 2006-2007 Population Management Program [PMP].

Red-flanked duikers are generally shy and elusive creatures that normally live in pairs. They are monogamous animals with a very short estrus period of only ~1/2 to 1 full day¹. Gestation is recorded at ~223-245 days^{2,3}. Given that the estrus period is so short, the staff working with the duikers had never seen actual copulation by the pair. It was decided that a conditioning program would be established to help determine and monitor a possible pregnancy. The conditioning program started with scale training to track weight changes followed by ultrasound training to determine actual pregnancy and calf development. Upon completion of the ultrasound training, it was decided to apply her previous conditioning to radiograph training.

This article is a compilation of the steps taken and results found from these conditioning programs.

Scale Conditioning

1. Presented board covered with mats that were used in holding. Treats were placed on it as a tool for desensitizing.
2. Slowly raised the board until it was approximately the height it would be when placed on top of the bar scales.
3. Once the desired height was reached, desensitizing was practiced a couple of times a week with the bar scales, board and mats. The entire process took less than a month for her to voluntarily step up on the weighing board. (see Photos 1 & 2)



Photo 1

We did not use a clicker or whistle. Animal is very skittish with different/new sounds (general characteristic of duikers). We utilized a verbal reinforcement paired with food rewards of sweet potato, grape and apple as well as various other treats.

Training/desensitizing occurred both on and off-exhibit. When working on exhibit, there were opportunities to educate the public about red-flanked duikers and their husbandry at the zoo. One of the goals for scale training was to monitor weight gain during pregnancy.

Photo 2



Challenges: A couple of challenges were presented.

- 1) Lil is very skittish, so presentation of new items caused temporary setbacks.
- 2) Equipment is bulky and cumbersome which caused her alarm.

Abdominal Ultrasound Conditioning

Special Note: An ultrasound was performed approximately one year prior to the conditioning program described below. At that time, a developing fetus was observed. Ultrasound pictures showed parts of the fetus. (see Photo 3) Unfortunately, events occurred after this procedure which caused Lil to stop participating in ultrasound procedures and the following conditioning program was implemented for the next pregnancy.

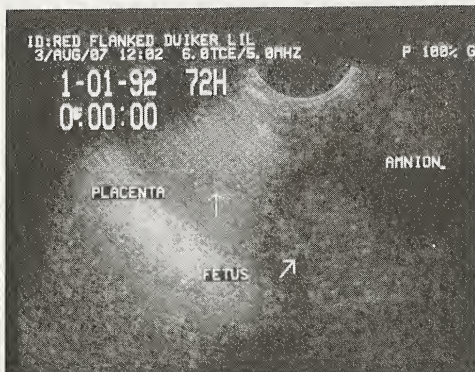


Photo 3

1. Started by letting her smell ultrasound gel which she liked and wanted to eat.

2. Started to desensitize her to the practice probe (12 ml syringe case) by setting it on the ground near her, then applied gel to practice probe and held it where she could investigate it.

3. Touched her side with practice probe without the gel first. Once she accepted it, gel was added.

4. We would practice first touching her lateral abdomen and then worked under her belly (see Photos 4 & 5). This process occurred a couple of times a week and in approximately two weeks she was readily accepting the practice probe and gel. Some of the conditioning was done outside in front of the public, which provided another opportunity for education.



Photo 4



Photo 5

5. Once she was readily accepting the practice probe and gel, a second person was added to simulate the 'vet' staff.

6. The next step was to add the ultrasound monitor prop, which was a very colorful, large cereal box. Initially she reacted by 'chuffing' (a normal alarm vocalization), but within a few sessions she was accepting the 'monitor' as well. (see Photo 6)

7. Once accepting all of the equipment, the second person presented different auditory stimulations such as cell phone beeps and radio noises. (see Photo 6)



Photo 6

8. The veterinary staff started participating in the training using the actual probe. This process took about two weeks for Lil to accept the new staff and ultrasound probe.

The procedure would occur in the off-exhibit holding area in two different stalls . The first stall was for the trainer, veterinarian and Lil. The second stall was for the equipment to which she was not desensitized. The veterinarian would perform the ultrasound, while another animal health staff member watched the monitor. After approximately one month, we were ready for the actual ultrasound. (see Photos 7 & 8)

Photo 7



Photo 8

Challenges: We faced several challenges.

- 1) She saw shadows and people making noise in the adjacent stall which caused her alarm.
- 2) She has a small umbilical hernia which is sensitive to touch and is in the general area where the probe is placed.
- 3) Her fur is thick and the site was not clipped, so a large amount of gel or alcohol needed to be used. She was not desensitized to alcohol and did not accept it easily.

Results: Based on weight and behavior it was thought that she was pregnant at the time of the ultrasound. Unfortunately, no fetus was seen during multiple ultrasounds. It was then decided to use the ultrasound-conditioning program to do radiographs of her abdomen to further investigate a potential pregnancy.

Radiograph Conditioning (*portable radiograph unit*)

Basically, she was already conditioned to stand for the radiographs because of the previous ultrasound training. There were only a few items that she was not used to seeing: radiograph aprons, the radiograph plate and the radiograph unit. (*see Photos 9 & 10*). Approximately six weeks after the last ultrasound, a successful lateral abdominal radiograph was taken. Unfortunately, it confirmed she was not pregnant.

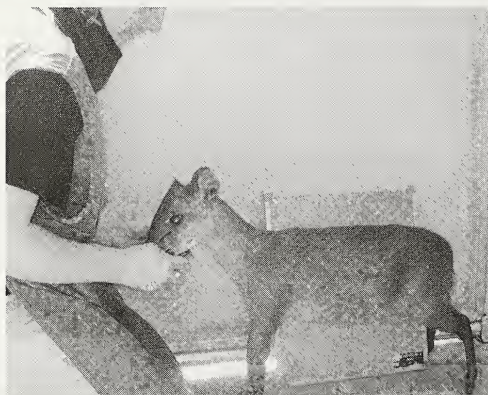


Photo 9



Photo 10

Acknowledgements: We would like to thank the Baobab staff, the Animal Curator Staff, the Kansas City Zoo and the Animal Health staff with special thanks to Dr. Ginger Takle.

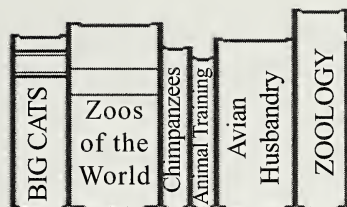
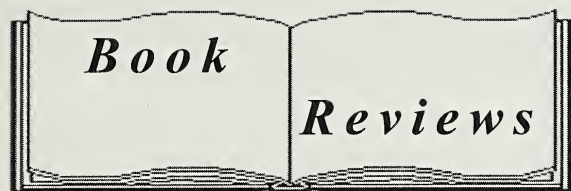
Footnotes:

¹ Woodland Park Zoo website: www.zoo.org

² Ungulates of the World website: www.ultimateungulate.com

³ University of Michigan Museum of Zoology website: www.animaldiversity.com

**Kim Wanders is currently employed at the Monterey Bay Aquarium, Monterey, California.*



The Great Penguin Rescue: 40,000 Penguins, a Devastating Oil Spill, and the Inspiring Story of the World's Largest Animal Rescue

By Dyan deNapoli ©2010
Free Press, a Division of Simon & Schuster
ISBN 9-7814-3914-817-4
Hardcover, 320 pgs. \$26.00
e-book ISBN 9-7814-486-1

*Review by Tammy Root
AAZK National Board Member
Indianapolis Zoo, Indianapolis, IN*

As a penguin keeper for many years, I was honored to be asked to review *The Great Penguin Rescue*. Once I started reading the book, I simply couldn't put it down. The book goes into great detail about how people from around the world came together after a devastating oil spill.

On June 23, 2000, the ship "Treasure" sank. Treasure was carrying over 1,500 tons of oil, most of which had spilled just off the coast of Cape Town, South Africa. This was an environmental disaster. Tens of thousands of African penguins (*Spheniscus demersus*) were in danger. Since 1900, the population of African penguins had dropped from three million to approximately 170,000 at the time of the oil spill. Without help, the African penguin population would see another rapid decline.

The world did not need to see another wildlife disaster. Luckily, this disaster had a happy ending. A whopping 90% of the rescued birds were released after being cleaned and rehabilitated. Dyan deNapoli gives the reader "come to life" descriptions of what it took to clean and rehabilitate each and every bird, how each volunteer was trained and the commitment it took to accomplish such an enormous task. It's almost as if every reader was part of the rescue operation.

The success of the operation couldn't have been achieved by one individual. It was a team effort that involved 12,500 volunteers, 556,000 dedicated hours and hearts of gold. "Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has." (Margaret Mead, US anthropologist & popularizer of anthropology [1901 - 1978]).

The take away message from this book is simply: "If we all work together, we can make a difference".

The latest pdf version of **Standard Common and Current Scientific Names for North American Amphibians, Turtles, Reptiles, and Crocodilians**, Sixth Edition (2009) by Joseph T. Collins and Travis W. Taggart remains available gratis online at: http://www.cnah.org/cnah_pdf.asp

The first edition of this authoritative compilation, published in 1978, listed 454 species of amphibians, turtles, reptiles, and crocodilians, and was quickly adopted nationwide as a source for common names for these North American (north of Mexico) animals, names that could be consistently used worldwide to avoid confusion, both in spelling and during conversation.

This sixth edition, published in printed form on 5 April 2009, lists 621 species of amphibians, turtles, reptiles, and crocodilians in the United States and Canada, an increase of 167 species (27%) since 1978 and an increase of 232 species (37%) since 1956, which demonstrates clearly how much the diversity of these animals in North America was previously underestimated.

The standard common names in the fourth edition (1997) of this list were used exclusively in the well-known "Peterson Field Guide to Reptiles and Amphibians of Eastern and Central North America" (third edition expanded, 1998, Houghton Mifflin Co., Boston), were adopted exclusively in the "The Frogs and Toads of North America" (recently published by Houghton Mifflin; Elliott et al. 2009) and will be adopted for the forthcoming fourth edition of the Peterson Field Guide, which has the widest distribution of any book ever written about these creatures.

The pdf version of this sixth edition has been updated since the print version was issued on 5 April 2009 (thus far, over 2,200 copies of this latest edition have been requested and/or mailed worldwide). We anticipate that the next (seventh) edition of this list will be published in 2014.

Also available as a pdf - **A Pocket Guide to Kansas Snakes, 3rd edition** by Joseph T. Collins & Suzanne L. Collins with photographs by Suzanne Collins and Bob Gress. Published by the Friends of the Great Plains Nature Center (Wichita). Sponsored by the Kansas Department of Wildlife & Parks (Pratt), Westar Energy (Topeka), The Center for North American Herpetology (Lawrence), and the Great Plains Nature Center (Wichita). Date of Publication: July 2010. To download a free copy of this booklet, go to: http://www.cnah.org/cnah_pdf.asp

This pocket guide covers the 38 kinds of snakes found in Kansas, all illustrated with exquisite color images. Pocket guides are an important way to get people involved with wildlife conservation, because the more people become familiar with a group of animals, the more they have invested in them and their habitat. In this guide, Joe and Suzanne Collins reveal the abundant serpent fauna of the Sunflower State, with sections on size, description, and habits.

Contains information on all Kansas serpents and organizes them in the Family Leptotyphlopidae (Slender Blind Snakes), Family Colubridae (Harmless Egg-laying Snakes), Family Dipsadidae (Harmless Rear-fanged Snakes), Family Natricidae (Harmless Live-bearing Snakes), and Family Crotalidae (Pitvipers).

New features: Taxonomy remains generally unchanged except that the Family Xenodontidae is synonymized with the Family Dipsadidae (resulting in both Hognose Snakes being placed in the Family Dipsadidae), the generic name of the New Mexico Blind Snake is now *Rena* instead of *Leptotyphlops*, and the Speckled Kingsnake is recognized as a distinct species, *Lampropeltis holbrooki*.

For greater accuracy, comprehension, and ease of use, this book has adopted the long-standing, traditional, standard common names for North American herpetofauna maintained by CNAH, published by Collins & Taggart (2009), and recently adopted in the new book, *Amphibians, Reptiles, and Turtles in Kansas*, by Joseph T. Collins, Suzanne L. Collins, and Travis W. Taggart (2010 Eagle Mountain Publishing).

The 38th Annual AAZK National Conference

San Diego, CA: August 24-28, 2011

Are you counting the days until the 2011 National AAZK Conference in San Diego? We are! The San Diego AAZK Chapter is excited to announce more details on the conference, listed below. Please look them over and log on to our website www.sdaazk.org to register now before you miss out on workshops or our behind-the-scenes opportunities!

Looking for Sponsors!

Have you considered getting involved by becoming a sponsor of the 2011 National AAZK Conference in San Diego? Now's the time to support a great organization and be seen among animal care professionals from around the world.

Contact Conference Co-Chair, Matt Akel at matthewakel@att.net for more information on how to help make a difference.

Be sure to visit www.sdaazk.org for continual updates regarding the conference. Don't forget to visit us at Facebook and Twitter via our webpage.

Registration

Online conference registration will be preferred, however other options will be made for those unable to register online. For the 2011 National AAZK Conference, SD AAZK is using Eventbrite as its registration source. When you go to register at www.sdaazk.org, you will be linked to our Eventbrite site. All conference events, such as Pre & Post Conference Trips, Zoo Day Behind-The-Scenes (BTS) locations and times, and San Diego Zoo's Safari Park special events, are now offered online for sign-up at the time of registration. Please read all the categories when you go to register. Therefore those who register early will have first choices as to areas they would like to visit. Workshops are starting to fill up so hurry and register now!

Prices

Full week registration:

- Members: \$200 (includes all paper sessions, Icebreaker, Zoo Day, Awards lunch/dinner, T-shirt)
- Non-members: \$275 (includes all paper sessions, Icebreaker, Zoo Day, Awards lunch/dinner, T-shirt)

NOTE: Full registrations may be transferred among different individuals on different days if desired, but only one conference packet with one conference badge will be issued per registration. If conference registration is purchased for a group, cost will be dependent on group's AAZK membership status and will state group's name. All individuals will only be able to enter conference areas if wearing conference badge.

- Daily Registration: \$75
- Icebreaker only: \$75
- Banquet only: \$100
- Conference T-shirt: \$15

There will be an increase in cost for registration **after** July 13, 2011.

- Late Registration Fee for Members: \$275
- Late Registration Fee for Non-Members: \$350
- Daily Registration Fee: \$85

Pre- and Post-Conference Trips

Pre- and Post-Conference Trips are still being worked on but the following is a tentative schedule. Times are yet to be determined.

Tuesday, August 23: SeaWorld San Diego Visit. Meet SeaWorld staff for an exciting day. Includes entrance to park, Skyride, Skytower, special Behind-The-Scenes experiences, and transportation. Limited to 50 people. Donation of \$70 pp. Questions regarding this trip? Contact Linda Henry at Linda.henry@seaworld.com for details.

Wednesday, August 24: San Diego Zoo Safari Park Photo Caravan. Ride into the Park's open field exhibits in a flatbed truck, and get a chance to feed giraffes or rhinos while capturing safari style photos of wildlife in a natural setting. The first 100 people to register will be able to sign up for this one-hour tour for only \$35. Price includes San Diego Zoo Safari Park admission, tour, and transportation. Limited spaces.

Monday, August 29: Visit to Alpine and Julian. This trip includes a stop at the local exotic cat rescue facility "Lions Tigers and Bears" with a stop in Julian for wine tasting and lunch at Menghini Winery. Continue on to the California Wolf Center for an afternoon presentation and tour. Transportation included. Cost \$60 pp. Questions regarding this trip? Contact Hali O'Connor at halieden44@yahoo.com for details.

There is so much to do in San Diego! We are offering information for other activities while you are in town. San Diego is home to five zoos and aquariums. In addition to the San Diego Zoo, San Diego Zoo Safari Park and SeaWorld San Diego, consider visiting SeaLife Park at Legoland and the Birch Aquarium at UCSD during your conference visit. Are you interested in a kayak tour or snorkeling with leopard sharks in La Jolla? Would you like to visit Disneyland? Disneyland is located in Anaheim, 1 hour and 40 minutes drive from San Diego (w/o traffic). Let us know what you would like to do and we will help you plan your activity.

Program

Our SDAAZK Board is extremely excited to announce that our keynote speakers will be Joan Embery and Juli Scardina. Joan Embery has served as a champion of environmental and conservation issues around the world. Juli Scardina is an Animal Ambassador for SeaWorld and Busch Gardens and has shared her love of animals and commitment to wildlife conservation with people across the nation. For more information on our terrific keynote speakers, please visit our website.

Icebreaker

We are thrilled to hold the Icebreaker at the San Diego Zoo Safari Park. The San Diego Zoo Safari Park is an adventurer's safari paradise in Southern California. The 1,800-acre Safari Park is home to more than 3,000 animal representing more than 375 species - many living in wide, open field enclosures. So jump onto one of our thrilling array of tours and create memories of adventure - all while benefitting the conservation of species here and in more than 35 countries across the globe. We will offer a limited number of tours at a very reasonable price. To learn more visit <http://www.sdzsafaripark.org/>

Zoo Day

Conference delegates will have all day to explore the San Diego Zoo! Zoo Day will include a free breakfast and lunch, Behind-the-Scenes tours, Open Houses, and special presentations. Special visits in various areas will be available on a first come, first serve basis, dependent upon when you register for the conference. You will even receive a discount on merchandise and food throughout the zoo!!!

The San Diego Zoo's most recent renovations include the newly remodeled Conrad Prebys Polar

Bear Plunge. With a new Experience Wall, keepers open up the glass panels and interact with a polar bear through a mesh barrier as you stand just feet away. There's also a hidden surprise! Other new interactive elements include: Measure Up - Compare your height to our life-size polar bear statues, see how many people it takes to weigh the same as an adult polar bear, and check the refrigerators to see how much humans eat compared to polar bears; Snow Den: Crawl into a polar bear den to see how mother polar bears raise their cubs, then pop your head up through ice holes like a ringed seal, the polar bear's prey; Research Helicopter: Find out how conservation researchers study polar bears in the Arctic, and climb into the seat of a real research helicopter; It's Melting: See 4-D models of the Arctic ice from 1989 and 2007 to see what's happening to the polar bear's habitat. Play the ice floe game by hopping from one floe to another along the ground to see if you can get to food; Carbon Graph: Find out what recorded carbon dioxide levels have been historically and compare them to where they are today. Discover what you can do to reduce your carbon footprint to make a difference. To learn more visit <http://polarbearplunge.sandiegozoo.org/>

Another milestone at the San Diego Zoo is the amazing Harry and Grace Steele Elephant Odyssey. Elephant Odyssey is the largest multispecies exhibit ever built in the 92-year history of the San Diego Zoo. The entire Elephant Odyssey experience covers over 7.5 acres, (all within the 100 acres of the Zoo). The 2.5-acre elephant exhibit and the half-acre Elephant Care Center creates a living area six times the size of the current elephant exhibit, with an amazing use of space that includes built-in enrichment, water features, and much more. You will have the opportunity to see giant water bugs, pond turtles, secretary birds, California condors, guanacos, tapirs, capybaras, African lions, jaguars, and of course, elephants! To learn more, visit <http://www.elephantodyssey.com/>

Exhibitor Information

We will have exhibitor tables available during the duration of the conference. Exhibitor tables will be located in the Westin Gaslamp Quarter Hotel in a highly visible area. There will be a limited number of tables available so be sure to reserve yours soon. Exhibitor rates are as follows:

- AAZK Members: \$100
- AAZK Non-members: \$200
- Conservation Groups: \$ 50

Note: Additional fees may apply.

Chapter Challenge

Don't miss out on this opportunity to get involved with the Chapter Challenge! How would you like to win a free registration or a registration in addition to a shared double room?? Do you want to support the general conference budget to help make this gathering spectacular? Visit our website at www.sdaazk.org for more details!

Accommodations

Hotel registration at our special conference rate is available NOW! The Westin is located in San Diego's historic Gaslamp Quarter, featuring fine shopping, restaurants, entertainment, and culture. The Westin Gaslamp Quarter offers a unique location with the exhilarating excitement of the city at our doorstep. Because of the Westin's central location, it is easy to use our public transportation system. Conference delegates will be able to access public transportation to many of San Diego's main attractions, including the San Diego Zoo, SeaWorld, Scripps Birch Aquarium, and our beautiful beaches. Conference delegates will also enjoy the Westin's hospitality, and the environment will appreciate their green policies.

Conference Room Rate: \$159 per night. The hotel has a limited number of double rooms available; if you need two double beds in the room, please book early, and let the hotel know you'd like a double room.

- Room rate: Single or Double – \$159, Each additional person \$20

Hotel rate is available until August 2, 2011

To book your hotel reservation, go to www.starwoodmeeting.com/Book/aazk or visit www.sdaazk.org

Roommate Connections

Looking for a roommate during the conference? Let us know your preferences for a roommate and we will try our best to help you find a roommate during the 2011 National AAZK Conference in San Diego. Information we will need includes: Your name and institution you work for, roommate preference (male/female), smoker vs. non-smoker, and your dates of arrival and departure. Email Laurie Brogan at birdladysdaazk@cox.net with your information.

Transportation

By air: Conference delegates should fly into the San Diego International Airport (SAN). Bus from Airport to Westin Gaslamp Hotel, Route # 922: Use San Diego's Metropolitan Transit System (www.sdmts.com) for \$2.25 (exact fare required) from the airport to the hotel as your cheapest and greenest way to arrive. Route #992 takes 15 minutes and leaves from in front of the airport every 13 minutes. Tell your driver your destination is the Westin Gaslamp Hotel at Horton Plaza. Once you exit the bus on Broadway Avenue, the hotel is on that same side.

Auction Events

Would you like to participate in the 2011 National AAZK Conference's Live and/or Silent Auctions? Items donated for the Live Auction should be valued at \$300 and up (or equivalent). These items could include animal artwork, collectable artwork, jewelry, vintage pieces, gift certificates, vacation stays, and more. There will be a limited number of items used for the Silent Auction, so unique and creative items are encouraged.

Ideas of items you can donate for the Silent Auction: memorabilia from your organization, jewelry, items that are appropriate for resale, and anything else you think would be of interest. Both auctions will be held on August 28th during the awards banquet at the Westin Gaslamp Hotel. Preview time will be announced at the conference, so stay tuned. You won't want to miss out! Auction forms MUST accompany all donated items (download form online). If you are bringing items with you to the conference, please turn in the auction form and donated items at time of registration. If sending or mailing items ahead of time, please send items and completed auction form to: San Diego AAZK ATTN: Maureen O. Duryee P.O. Box 632984 San Diego, CA 92103

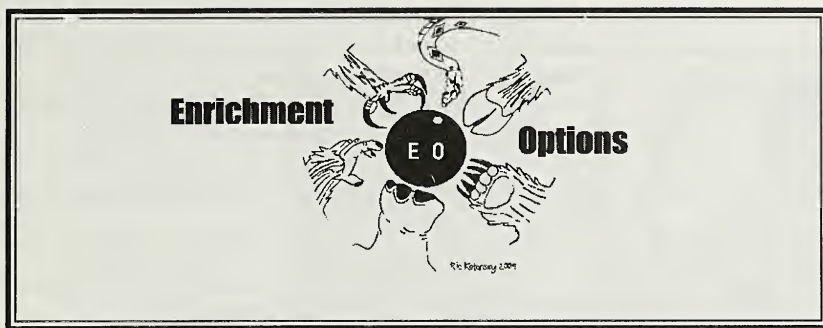
For auction information, please contact Maureen O. Duryee, SD AAZK Fundraising Coordinator, at Duryee@cox.net. The auctions will be exciting so be sure to check out all the items during the preview.

Announcing the San Diego Chapter's Fundraising & Rewards Program

A unique way to shop at your favorite online stores; get great discounts, get cash back, and support the San Diego AAZK chapter! Help make the 2011 National AAZK Conference outstanding by supporting our fundraising cause! By simply using our Fundraising and Rewards program, 50% of the cash back you generate automatically gets donated to the San Diego AAZK and the other 50% goes back to you!! Plus receive exclusive member discounts! Register now for your FREE Beyond Perks account by simply going to: <http://www.beyondperks.com/sdaazk/> Three Easy Steps: Register, Shop, Save! Please spread this terrific program to your friends, family, and institution to support us!



www.sdaazk.org



EO Editors -

Julie Hartell-DeNardo, Saint Louis, MO and Ric Kotarsky, Tulsa Zoo & Living Museum

Individual Enrichment Assessments: Catering to the Preferences of 2.1 Sulawesi Macaques (*Macaca nigra*)

By

*Kristin Abt, Primate Enrichment Intern
Smithsonian National Zoological Park, Washington, DC*

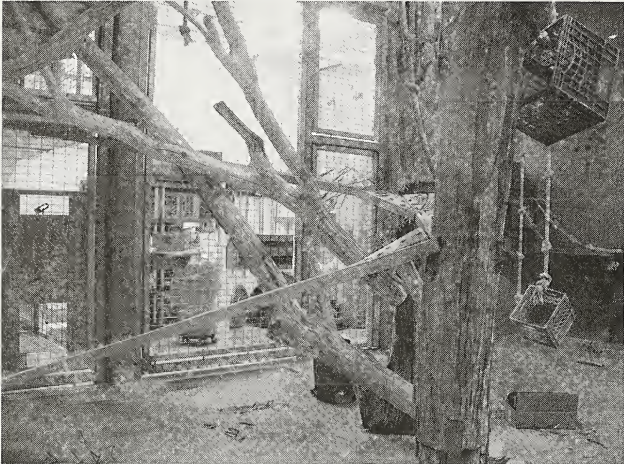
Introduction

Zoos strive to serve as educational centers for people to learn about wildlife and conservation. In order to ensure that animals serve as representatives for their wild counterparts and to improve their physical and psychological well-being, enrichment plays a critical role in the improvement of animal management techniques and increases the educational potential that animals can provide to zoo visitors. It has been scientifically documented that the implementation of enrichment in captive primate situations reduces undesirable or abnormal behavior and increases species-appropriate behavior (Mallapur, Waran, & Sinha, 2007; Schapiro et al., 1996).

While the prospective benefits of enrichment have been established, differences in the effect of enrichment exist based on numerous factors, such as the level of complexity, the degree of novelty, the palatability of food, and individual animal differences. Videan et al. (2005) documented the use of enrichment by chimpanzees and found that all individuals preferred destructible items with higher levels of controllability. Mallapur et al. (2007) found that macaques that displayed injurious self-directed behaviors showed a decrease in such behaviors in the presence of enriched environments and an increase in natural behaviors, including exploratory and foraging. Additionally, macaques interacting with both physical and feeding enrichment spend more time feeding and playing along with less time engaging in self-directed or inactive behavior (Schapiro et al., 1996).

The Think Tank at the Smithsonian National Zoological Park currently houses 2.1 Sulawesi Macaques (*Macaca nigra*) – Spock (22 years), Rex (20 years), and Diane (20 years). These individuals are group housed during the day (weather-permitting) and separated into 1.1 (Rex and Diane) and 1.0 (Spock) groups overnight. The intent of this study was to systematically investigate the use of different enrichment items by each individual in order to appropriately design enrichment calendars that would lead to a higher likelihood of animals using items offered, thus improving the time spent engaging in exploratory and foraging behaviors typical of the species. Anecdotally, keepers had commented on individual differences in ability and interest witnessed among the group. Specifically, it had been noted that Spock appeared to engage in less exploratory behavior and did not use a number of currently offered items, whereas Diane interacted with many enrichment items. Quantifying the percentage of scans in which the animals used offered items would result in a more

accurate assessment of enrichment usage. Additionally, relatively few studies can be found relating to this particular species' enrichment use in captivity.



The Think Tank exhibit housing the Sulawesi macaques.

The particular aims of this project are detailed below:

- Assess current enrichment usage by 2.1 Sulawesi Macaques
- Modify lesser used items to serve a different, usable function
- Introduce new items or re-introduce uncommonly used items to assess levels of interaction
- Recommend amendments to the enrichment protocol based on study findings

Methods

Data were collected during the months September – November, 2009 three days per week with AM and PM sessions conducted between the hours of 0800 and 0900 and 1400 and 1500, respectively. Behavioral scan-sampling on 30-second intervals for 30 minutes was performed, documenting the following behaviors: feeding, foraging, interaction with enrichment, locomotion, grooming, autogrooming, inactive, and self-biting (Spock only). Animals were considered to be “interacting with enrichment” if any part of their body was touching the item on the scan. Prior to the study period, modified enrichment calendars were created with AM and PM sessions to establish which items would be evaluated during each session. This would allow the researcher to gain a representative sample of the items currently used by keepers to enrich the macaques. A total of 33 enrichment items were evaluated with numerous modifications (Fig. 1). Percent of scans using each enrichment item were calculated for each individual. Microsoft® Office Excel was used to calculate and graph each individual’s enrichment usage.

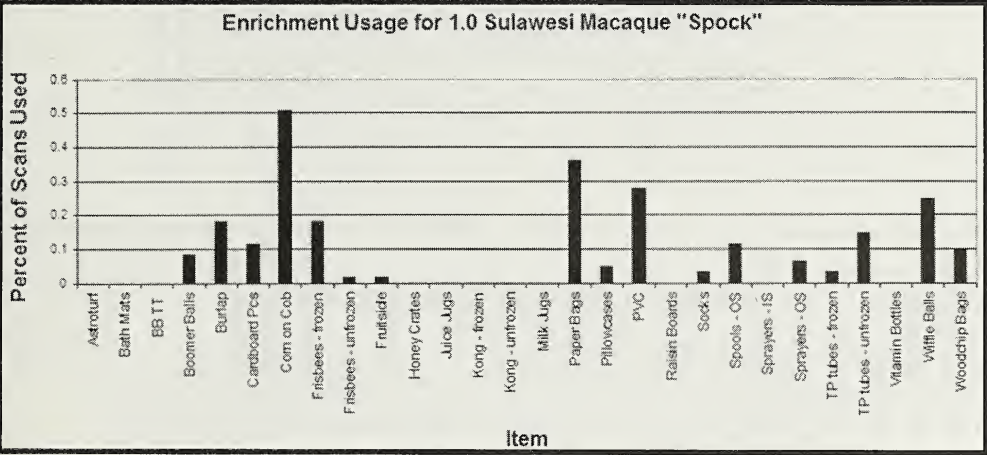
Astroturf Mats	Bath Mats	Bamboo Treat Tubes – BB TT	Boomer Balls (with, without holes)	Boots (rubber)
Boxes (cardboard)	Burlap	Cardboard Pieces (blue from apple crates)	Chew Sticks (from approved browse)	Corn on Cob
Dixie Cups	Frisbees (frozen, unfrozen)	Fruit Kabobs	“Fruitsicles” (various sized ice treats)	Honey Crates
Juice Jugs (plastic)	Kongs (frozen, unfrozen)	Craft Paper - KP	Lids	Milk Jugs
Paper Bags (lunch)	Pillowcases	PVC tubes	Raisin Boards	Shredded Paper
Socks	Spools (with, without holes)	Sprayers (cleaned disinfectant)	Toilet Paper Tubes (frozen, unfrozen)	Traffic Cones
Vitamin Bottles (plastic)	Wiffle Balls	Woodchip Bags		

Figure 1. Enrichment Items Evaluated with variations

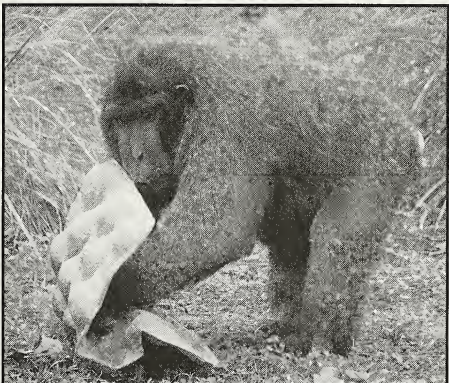
Results

Overall, no item was used very infrequently (<10% of scans) by all individuals. Many individual differences existed with distinct patterns emerging. 1.0 Sulawesi Macaque Spock interacted with enrichment on average of 9.5% of scans. Particularly ineffective were items that involved complex manipulation, such as bamboo tubes, juice jugs, vitamin bottles and sprayers with food inside, (Fig. 2). A smaller number of items were sampled with Spock due to weather difficulties. Effective enrichment items (>25% of scans) included corn on the cob, paper bags, stuffed PVC tubes, and Wiffle® balls.

Figure 2



Spock interacting with a feed sack.



Spock with a cardboard enrichment item

1.0 Sulawesi Macaque Rex interacted with enrichment on average of 26.1% of scans. Particularly ineffective were items that did not requires a high degree of manipulation, such as small branches with holes for food, unfrozen Frisbees® and Kongs® with smeared items, fruit kabobs, honey crates, lids, and spools with smeared items (Figs. 3 & 4). Unlike Spock, Rex engaged with many items for extended periods of time during sessions (>50% of scans) that required higher degrees of destruction and manipulation, including Boomer Balls®, juice jugs with holes, frozen stuffed Kongs®, craft paper, milk jugs, spools with holes, and stuffed Wiffle® balls.

Figure 3

**Enrichment Usage for 1.0 Sulawesi Macaque "Rex"
(Part 1)**

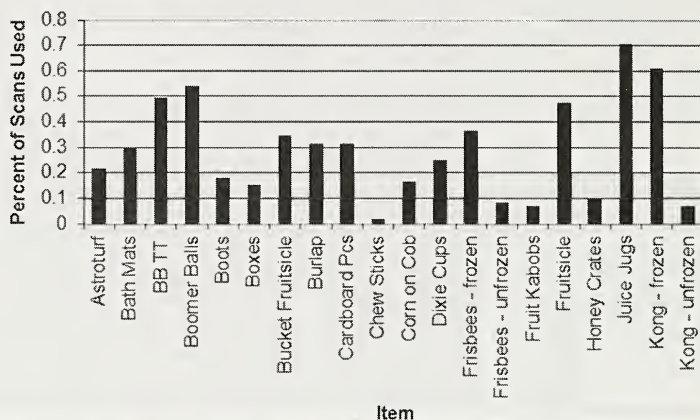
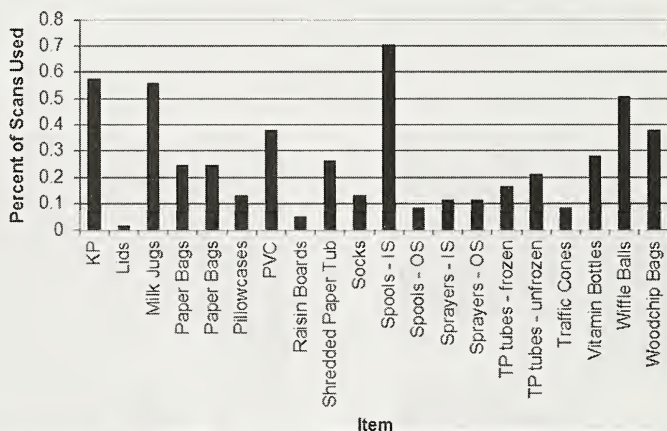


Figure 4

**Enrichment Usage for 1.0 Sulawesi Macaque "Rex"
(Part 2)**



Rex with PVC pipe



Rex checks out an enrichment mat

0.1 Sulawesi Macaque Diane interacted with enrichment on average of 17.6% of scans. Particularly effective items included boomer balls with holes, stuffed boots, fruitsicles, frozen and unfrozen Kongs®, craft paper, sprayers, toilet paper tubes, traffic cones, Wiffle® balls, and woodchip bags (Figs. 5 & 6). Ineffective items included Astroturf®, bathmats, bamboo tubes, burlap, milk jugs, pillowcases, and vitamin bottles. She displayed a variety of enrichment usage spanning both manipulative and foraging-based items.

Figure 5

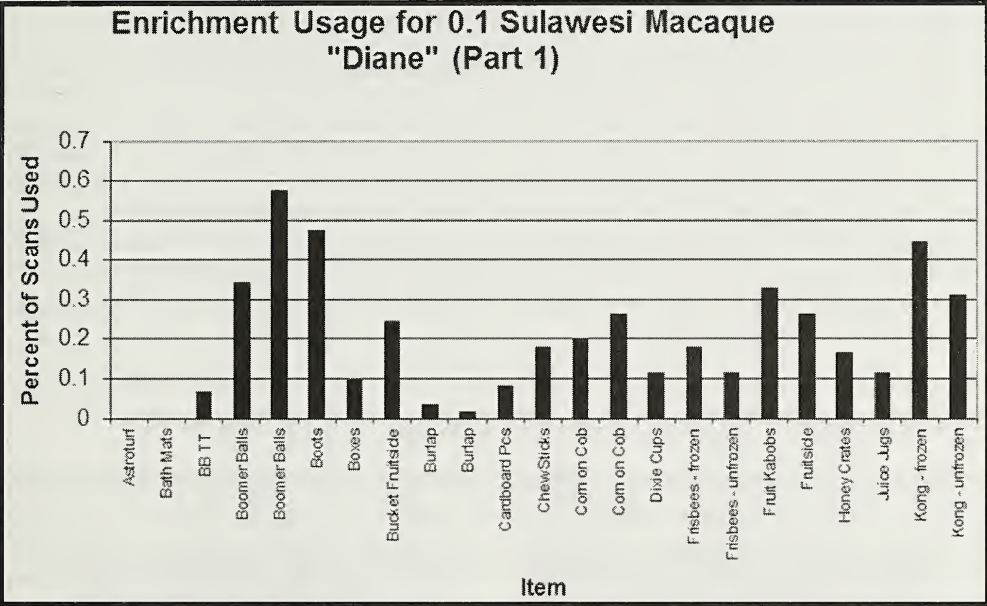
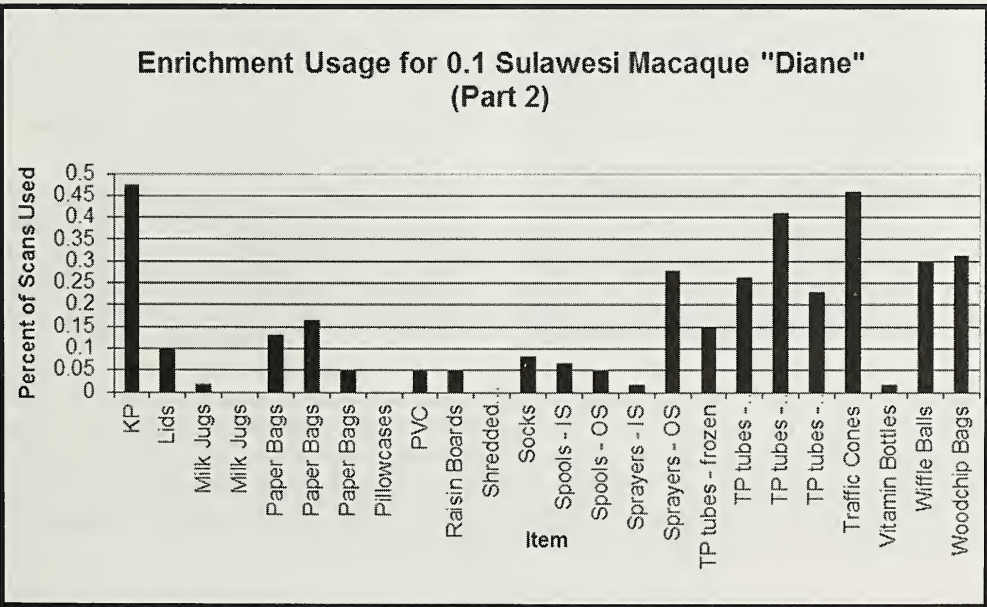


Figure 6



Discussion

Potential reasons to account for individual differences could include social interactions, such as Rex dominating items requiring manipulation. Attempts to limit this confound were taken by ensuring that a greater number of items than individuals were presented during each session. Diane spent a large percentage (up to 50% of scans during some sessions) of each session foraging for diet and scattered food items, which could explain her decreased engagement with enrichment also present during that time. Spock frequently remained inactive in the presence of untouched/unexplored enrichment items, which could possibly be due to chronic arthritis, which could limit his movement and foraging patterns.

By identifying individual differences and preferences in enrichment usage, the staff is able to tailor enrichment to suit the needs of the macaque group. Additionally, this information can be used to design more detailed enrichment calendars focusing attention on the items that engage the macaques and continuing to modify the items that do not. Also, this allows for opportunities to expand the program. Future projects can attempt to increase Spock's interaction with enrichment by creating new methods of presentation and new items of potential interest to him that better fit his ability. Based on Rex's investment in time to interact with complex items, increasing the number of puzzle feeders and other manipulative opportunities for him could be greatly beneficial. Diane's motivation to forage in hay, grass, and other substrates can also be greater encouraged, and can increase her activity levels and overall mobility.

The following points summarize priorities as identified by the author for the further development of the Sulawesi Macaque enrichment program at the Smithsonian National Zoological Park.

- With regards to diet, staff can focus upon splitting diet into multiple feedings and variably cutting it into smaller pieces to increase forage time. Also important is putting diet, especially high value items, into enrichment devices (boots/crates/jugs/sprayers/ Boomer® Balls/spools) or substrate (grass/hay/shredded paper) rather than placing in one or a few locations. Ideally, efforts can be made when possible to combine substrate and devices (such as hay in crates) to maximize forage time and manipulation of object.
- With regards to enrichment, staff can attempt to offer forage items both in the yard and in hay indoors with a goal of at least two times/day (ex. AM and PM); hide food in multiple places throughout the exhibit to increase time spent walking and climbing rather than handing enrichment out; offer ample manipulative devices especially for Rex and forage items for Diane; and increase the number of enrichment items (ex. 10 treat tubes with less food vs. five filled ones) to also increase travel time.
- Suggestions for future development include: experiment with more sensory enrichment (nature sounds/colors/etc.); create a separate enrichment calendar for Spock to experiment with new options for him while maintaining variety for Rex and Diane; introduce new items, such as trash cans and lids, leaves as substrate, pine cones, and shredded paper regularly, and expand the training program (potential behaviors: target, station, up, sit, turn around, present hands and feet to be touched) in order to increase mobility and access for animal management.

Overall, this study proved to be a valuable exercise and investment of time for a semester intern project. While keepers may not have the time in a daily schedule to quantitatively assess enrichment effectiveness, volunteers and interns can greatly assist in this worthwhile endeavor. Without a sound knowledge of how each animal uses the items offered, substantial amounts of time and energy through the offering of items that do not have the desired goal of increasing activity through manipulation and foraging could potentially be better used and better serve the macaques.

Modifying items currently available has the potential to increase their use and novelty. Simple measures, such as drilling holes in spools or balls or walking to pick up large paper bags from

adjacent zoo areas, can greatly benefit animals on a daily basis. Objectively assessing enrichment use also allows for this information to be disseminated to all staff that interacts with the macaques to ensure that everyone is aware of the limitations or successes associated with each item. Ultimately, considering the preferences of individual animals in a captive setting allows for each to obtain the maximum physical and psychological benefits.

Acknowledgments

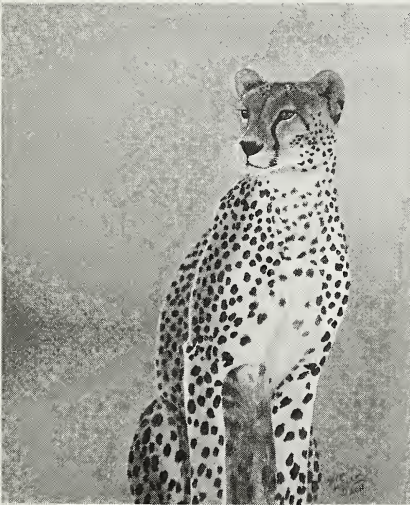
The author would like to thank the primate staff for accommodating her data collection and exhibit modifications throughout the study period. Specifically, she would like to thank Amanda Bania for her collaboration and support of the interns' projects and Lisa Stevens for approving her request to work with the macaques. Also, she would like to thank Spock and Rex for their enthusiastic greetings each morning and Diane for allowing the author to enter her "domain."

References

- Mallapur, A., Waran, N., & Sinha, A. 2007. A note on enrichment for captive lion-tailed macaques (*Macaca silemus*). *Applied Animal Behaviour Science*, 108, 191-195.
- Schapiro, S. J., Bloomsmith, M. A., Suarez, S. A., & Porter, L. M. 1996. Effects of social and inanimate enrichment on the behavior of yearling rhesus monkeys. *American Journal of Primatology*, 40, 247-260.
- Videan, E.N., Fritz, J., Schwant, M.L., Smith, H.F., & Howell, S. 2005. Controllability in environmental enrichment for captive chimpanzees (*Pan troglodytes*). *Journal of Applied Animal Welfare Science*, 8(2), 117-130.

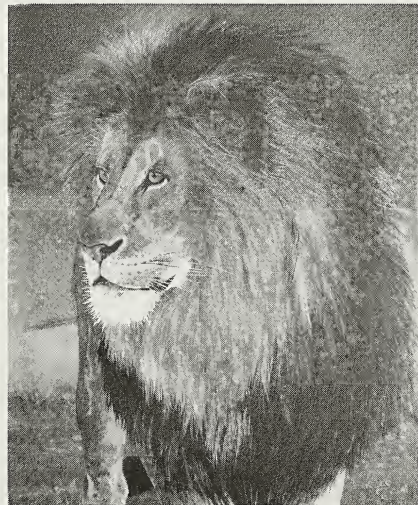
Photo Credits: All photographs taken by article author.

Art Prints Benefit African Wildlife Foundation



Spotted Sentinel

Artist: Jeff Wells



Ntchwaidumela:

He Who Greets with Fire

I will be selling 10 x 13 inch prints of the above artwork for \$45.00 each. Each image will be a limited edition of 250 prints. Larger prints can be created upon special request. Anyone interested may contact me via email at: jwells88@tampabay.rr.com

50% of the proceeds will benefit the African Wildlife Foundation.

Call for Enrichment Papers

You could be the next author published in the Enrichment Options Column

Have you considered writing a paper for the Enrichment Options Column before? If so now is the time to submit your article. If not, you might want to start considering now as there are many benefits to getting published in the AAZK Forum's Enrichment Options Column, for example:

- **Resumé Building:** Publications noted on your resumé can help to build your professional background and demonstrate your dedication to the field of zookeeping.
- **Networking:** By publishing an article and promoting the sharing knowledge with your peers you open the door to more networking possibilities. Keepers from other zoos may contact you to get further information regarding your article; you might meet someone at a conference or other zoo-related event that read your article and thereby will have instant conversation starter; even people within your institution are likely to come discuss your accomplishment and ideas.

These are just a few benefits of publishing a paper in the Enrichment Options Column. So, now some of you might be asking: what types of articles are we looking for? All enrichment-related articles are encouraged. One great thing about enrichment is variability – this also applies to enrichment articles!

Idea Descriptions & Blue-Prints: Articles describing in detail how to make enrichment from various tools and supplies in-house. Every institution has some great in-house enrichment ideas that can easily (and erroneously) be assumed all other zoo's know how to build, use, design, create, etc. Some folks have great creative and building skills that allow them to see new uses for items donated or laying around. Don't take for granted your common in-house ideas - we haven't all seen it all – share your ideas!

New Uses: Articles describing new uses for previous ideas. Coming up with a new application (whether it be a different species, a different presentation style, or other variable) can be a great way to get the most out of any enrichment idea. So even if the idea seems common, if the application is unique we want to hear about it – share your ideas!!

Species: Articles on any and all species are welcome in the Enrichment Options Column. We are interested in enrichment for all taxa, from ants to elephants - share your ideas!!!

Behavioral Studies: Articles with graphs, data and charts describing in detail the results of enrichment applications. These articles help to promote the science behind successful enrichment and can be very useful in promoting enrichment techniques within organizations. When working with animals, every data set is unique and those differences can garner very useful information, so even if your idea is similar to one already published the data is new and whether it is similar or different it can still provide valuable information – share your ideas!!!!

Length: Long articles, short articles, articles with lots of pictures, articles with lots of graphs, articles with lots of references, articles with none, etc – share your ideas!!!!

These are just a few ideas of the types of enrichment articles we are looking for. Have a type of idea not listed? Send it in. Questions about how to write an article, what to submit, or how to get started – just contact us and we'd be happy to help out. We are looking forward to all the enrichment creativity each of you has to offer (I'm particularly looking forward to editing an article on insect enrichment, hope someone sends on in soon). ~Julie Hartell-DeNardo, Co-Coordinator for the Enrichment Options Column, Saint Louis Zoo, St. Louis, MO.

WORLD FAMOUS CHEETAH DIES

Otiwarongo, Namibia – Chewbaaka, the beloved cheetah ambassador for the Cheetah Conservation Fund in Namibia, died on 3 April from a systemic infection that resulted from an attack on a rabid kudu that had jumped into his enclosure in late February. At almost 16 years old, Chewbaaka had far surpassed the typical lifespan of a captive cheetah, which is 12 to 13 years. Because he had been vaccinated for rabies, the disease did not contribute to his death.

“I do hope that all who have had the pleasure of knowing him will keep his memory alive, as a gentle ambassador for his species,” said Dr. Laurie Marker, founder and Executive Director of the Cheetah Conservation Fund. “He lived an amazing life and shared so much with so many. We will follow in his footsteps.”

In July 1995, a rancher’s dog killed all but one of a litter of cheetah cubs. The farmer brought the 10-day-old survivor to Marker. Extremely ill, the cub required round-the-clock nursing by Marker for several weeks. An intern suggested they name the cub after Han Solo’s furry sidekick in the original Star Wars movie. As few Namibians had seen the movie, his name was a curiosity his entire life.



CCF’s Executive Director, Dr. Laurie Marker, with Anatolian shepherd Koya, and Ambassador Chewbaaka.

(Photo © Cheetah Conservation Fund)

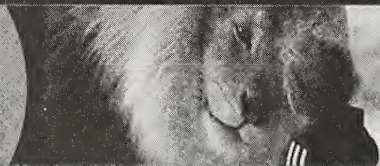
Due to his hand-rearing by Marker, Chewbaaka became so habituated to people that he could be brought out to the bush to meet visitors, including children, without a collar or leash. Yet he still retained many wild cheetah behaviors, such as the instinct to climb and mark “playtrees”--trees with low limbs that cheetahs frequent to keep track of other cheetahs in the area. He also chased a lure, reaching speeds in excess of 50 mph, to demonstrate the species’ incredible acceleration and speed. Tens of thousands of visitors to CCF over the years met the regal cheetah. He had been featured in dozens of television shows and magazine articles about CCF.

Chewbaaka was raised with an Anatolian shepherd, Koya, at CCF’s International Research and Education Centre. Marker breeds Anatolians, a Turkish breed, to give to livestock farmers to protect their small stock from predators. Koya and Chewbaaka became such constant companions that the two were often brought out to meet the public together so that Marker could explain to guests the role the guarding dogs were playing in saving the cheetah. Numerous zoos around the world have followed suit, raising young cheetahs with Anatolians to use as “ambassadors.”

Chewbaaka was chosen as the cheetah representative for the Genome 10K, an ambitious project to map the genetics of 10,000 vertebrates in five years. His DNA will be used to map the species’ genome.

- The Cheetah Conservation Fund is a Namibian non-profit trust dedicated to the long-term survival of the cheetah and its ecosystems.
- Since 1990, the organization has developed education and conservation programs based on its extensive bio-medical and ecological cheetah research studies, published scientific research papers and has presented educational programs to more than 350,000 outreach school learners, donated over 370 livestock guarding dogs to commercial and communal farmers as part of the CCF innovative non-lethal livestock management program, and has established a cheetah genome resource bank of cheetah sperm, tissue and blood samples.
- Research into cheetah biology and ecology has greatly increased our understanding of the fastest land animal and education programs for schools and the farming community help change public attitudes to allow predator and humans to co-exist. However, despite the many successes of CCF programs, the cheetah is still Africa’s most endangered big cat with ~10,000 cheetahs remaining.

For more information see their website at Website: <http://www.cheetah.org>



Register now for your FREE Beyond Perks account.
Simply go to: www.beyondperks.com/sdaazk

Announcing our Fundraising Rewards Program!

Shop, Save & Support Our Association!

By simply using our Fundraising and Rewards program,
50% of the cash back you generate automatically gets
donated to the San Diego American Association of
Zoo Keepers and the other 50% goes back to you!

Plus receive exclusive member discounts!

Store Name	Purchase Price	Cash Back %	Cash Back to You
Drugstore.com	\$68.76	8.00%	\$5.47
Barnes & Noble	\$36.54	4.80%	\$1.75
Famous Footwear	\$82.45	10.40%	\$8.57
Kohl's	\$64.96	3.20%	\$2.08

YOUR CURRENT
AVAILABLE CASH BACK
\$42.55



Beyond Perks is proud to offer three distinct ways to save:



Shop4Rewards

Shop online at
over 1,000 brand
name stores and
receive up to
30% Cash Back.



Local Rewards

In-store savings at
local merchants...
click, print, and
save!



Perk Rewards

Pre-negotiated
discounts on a
wide array of
services

Over 1,000 Online Retailers!

 OfficeMax



BARNES & NOBLE
BOOKSELLERS

KOHL'S
expect great things

GameStop

★ **macy's**



www.beyondperks.com/sdaazk

Viewpoint . . .

(Editor's Note: The Viewpoint Column offers readers an opportunity to express their opinions on topics related to the profession of animal keeping, AAZK or AKF. It is not a forum for expressing disagreements with employers about labor-related issues. Opinions expressed in this column do not necessarily reflect those of AAZK, Inc. or Animal Keepers' Forum. Materials submitted are published at the discretion of the editor.)

The Good Zoo and Euthanasia

By Peter Dickinson

Always a hot issue in zoos, euthanasia must be recognized as an absolutely essential part of the long-term and proper management of species in captivity. There is nothing wrong in killing an animal if it is done quickly and with forethought and kindness. When animals are euthanized for the correct reasons then it is morally right and justified. The uninformed will often level accusations of being 'heartless' and 'not caring' when precisely the opposite is true. Good zoos with managed populations can see the bigger picture.

In the wild, animals die in tragic, painful and stressful situations every day. It is a very much a kill or be killed world and if you don't face those two options you could face starvation or disease.

Within the good modern zoo nature's cruel balance has been stalled. Animals survive. They live longer. Equal numbers of males and females live. Man has to manage, to properly govern. Indeed today man is having to manage the wild as well. Culling of elephants, herds of deer and others has become a necessity to ensure that the larger populations do not starve.

Euthanasia in zoos is only part of species management and goes hand-in-hand with contraception, breeding separation and bachelor groups.

People seem more ready to accept the culling of huge numbers of cattle and sheep to prevent a disease outbreak. Thousands of unwanted dogs and cats are killed worldwide and scarcely a murmur is raised. In zoos, however, it is different. Here species are readily broken down into specimens. No longer are animals faceless, nameless numbers but creatures people can and do relate to. The zoos often create the situation themselves with publicity photos and 'name the baby' competitions and there is nothing wrong in that. Part of a zoo's role is to raise species awareness and this is best done through specimens. The specimens are, however, part of the species and it is the species which is being managed and not individuals.

The modern zoo is about the long-term management of genetically viable healthy populations of various species. It is important to recognize that this is long term. Nobody realistically believes that animals are about to be returned to the wild anytime soon. Admittedly it does occur in certain limited instances, but for the most part the problems facing animals in the wild do not appear to be going away anytime soon. With proper captive species management it may be as far as a hundred years from now that animals can be returned.

Distant though the prospect is, the species need to be ready. They need to be healthy and they need to be not too closely related. Animals can be taught to hunt, to recognize danger and more - to be 're-wilded' if you like. It is being done now in limited numbers today.

One vital aspect of captive species management is breeding. It is important with the limited number of captive species held that unrelated animals are paired up. Within the modern zoo cooperative this

is done by the Species Coordinator using sophisticated computer programmes supplied by ISIS, the International Species Information System. This is not a "go it alone" project but one in which good zoos banded together for the good of the species as a whole. The specimens are important but only as part of the overall species plan. The ISIS database holds the records of around two and a half million animals. Specimens may be cared for and greatly loved, but their real value is as genetic contributors.

The proper management of species in captivity requires that zoos that care, good zoos, sign up to the species management plan. This can be for any species and there are many such management plans already. The plan is put together by Taxon Advisory Groups or TAG's which meet together periodically to discuss progress, well-being, husbandry and the overall status of the species in the wild and in captivity. The TAG's will approve and appoint a studbook keeper and coordinator to keep a very close watch on 'their' species. Some studbooks may well be EEP's, or European Breeding Programmes and so involve an even greater number of zoos. They will produce an annual report and will advise on future breeding, moves, contraception and animals surplus to the overall plan.

The TAGS in their turn are watched over by recognized, established and sensible zoo authorities. Within the UK this would be BIAZA, the British and Irish Association of Zoos and Aquariums. BIAZA is a member of EAZA, the European Association of ZOOS and Aquariums. EAZA works very closely with other genuine zoo authorities around the world such as AZA, the American Zoo and Aquarium Association. It may all sound a little bit complicated but it needs to be if species are to be saved for future generations. Zoos that fall outside the umbrella of these reputable and concerned authorities have little or no understanding of species management and care little about the future. They are more concerned with lining their pockets today.

The importance of a specimen's contribution to the species management plan needs to be constantly assessed. It is important to know if the animal is capable of breeding and of rearing young. It is important to know this even if the young are not needed or later found to be surplus to requirements. There are several benefits to allowing animals to breed. First and foremost is to the animals themselves - so they can experience the natural enrichment of rearing young. The species coordinator can assess breeding potential and if the young are needed then all is well and good. The zoo benefits from having baby animals on exhibit which the public loves. It can be a win/win situation.

When such breeding is allowed, then parent rearing is absolutely essential otherwise the object of the exercise is defeated and there is no benefit to any of the animals. In the management of species the decision on what happens to the young must rest with the Species Coordinator, and not with the zoo the animals are in or to the decision of someone who cannot grasp the overall scheme of things.

If the young are surplus to the overall population either in terms of numbers or over-represented genes then they should be euthanized. Preferably this would be done at that time when the young would naturally disperse in the wild.

It may well be that contraception might be used over the next few breedings, but the animal might also be allowed to breed again, perhaps with a different mate. Long-term contraception can be positively harmful and may actually cause an animal to become sterile. Ensuring the animal is capable of breeding is important.

There are only a certain number of captive spaces available to species. Not every zoo is in a position to hold or wants to keep Tigers or Elephants or Condors. Space is at a premium.

Animals in good zoos are well cared for; they are even loved. Zoo staff are kind and considerate and genuinely concerned for their charges. Zoo staff can see the bigger picture, above and beyond the blinkered vision of some of their ill informed critics.

Euthanasia is only one part of Species Management. Passing or selling surplus animals outside of the species management programme is both dangerous and defeatist. Animals outside of a breeding programme contribute nothing to conservation or the overall welfare and well-being of the species. In fact, the opposite usually applies. On more than one occasion new blood/new genes tigers have been imported from outside of a breeding programme only to discover later that they were sub-specific hybrids. In fact the vast majority of tigers outside the managed 'good' zoo populations are 'generic' tigers of uncertain parentage or origin. Worse still is that closely related or sub-specific hybrids are bred together. This is especially so with White Tigers which some less reputable zoos like to breed and promote in the name of conservation.

Sending unwanted surplus animals away to the so called 'rescue centres' or 'sanctuaries' is, quite simply, wrong. The 'out of sight, out of mind' attitude does nothing at all for species conservation. It is a cowardly way out. The 'Rescue Centres' and 'Sanctuaries' are undoubtedly saving lives but they are NOT saving species. The opposite is more true. They may even breed animals and so compound the problem. They are not breeding for conservation, however.

They breed to line their pockets by having cubs on show to present to a gullible public. It could be argued that far from saving lives, these places are responsible for the absolutely pointless and purposeless deaths of thousands of other animals. A surplus tiger could easily be expected to live for around 15 years. That tiger will happily consume 7kg of beef for six days a week for 52 weeks of the year. That is 2,184kg of beef a year. Within the so called 'Sanctuaries' and 'Rescue Centres' there are hundreds of surplus generic tigers eating the same amount. That is an awful lot of cows being killed, especially to feed animals that are essentially valueless to conservation and useless for long-term species conservation. Is the life of one surplus tiger worth more than that of a hundred or so cows?

No zoo likes culling or euthanasia but good zoos face up to the fact. If we are to maintain the species for our great-grandchildren, for the world, for posterity then harsh but sensible and logical decisions must be made.

Holding surplus long-term rather than deal with euthanasia not only takes up spaces that could be utilized for other species programmes but it wastes employees' time and utilizes money that could be spent on further conservation projects.

Outside of Species Management zoos sometimes need to cull the sick, the weak and the elderly. No one likes to do it. No one likes to choose, but the choices have to be made. Quality of life has to be considered along with resources and available money. Deciding to euthanize is not abstention from caring. It IS caring!

(The Author: After more than 40 years working in private, commercial and National zoos in the capacity of keeper, head keeper and curator, Peter Dickinson started to travel. He sold his house and all his possessions and hit the road. He has traveled extensively in Turkey, Southern India and much of South East Asia. In his travels he has visited over 200 zoos and writes about these in his blog <http://zoonewsdigest.blogspot.com/> or on Hubpages <http://hubpages.com/profile/Peter+Dickinson>. Peter earns his living as an international independent zoo consultant, critic and writer. He describes himself as an itinerant zoo keeper, a dreamer, a traveler, a people watcher, a lover, a thinker, a cosmopolitan, a writer, a hedonist, an explorer, a pantheist, a gastronome, a sometimes fool, a good friend to some and a pain in the butt to others.)

Article Source: http://ezinearticles.com/?expert=Peter_Dickinson

CONSERVATION STATION



A First Hand Account of How Zoos are Making a Difference in East Africa

By Amy Hanna

*Wildlife Conservationist and Environmental Educator
Kampala, Uganda*

Even while I was a zoo keeper for eight years, I wanted to experience Africa to see what wildlife conservation organizations were doing in the field. While working at the Lincoln Park Zoo in Chicago Illinois, I was always interested in the Conservation and Science Department's many programs. Instead of waiting for a conservation job to come along, I saved up money and planned my first Africa trip in 2006 to South Africa and Zambia. Then I volunteered again in Zambia in 2009 and 2010 for Munda Wanga Environmental Park.

Recently, I decided to take the jump and move to Uganda semi-permanently. I spent the last two months in Uganda and Rwanda networking. This experience showed me that zoos and their staff supporting field projects are making a difference. I'd like to share a few personal examples:

The Kasiisi Project

Kibale National Park, Uganda

The Kasiisi Project was established in 1997 with the aim of supporting the local communities that live on the Western edge of Kibale National Park, and creating awareness of the importance of the forest and its species, especially the local keynote species, the chimpanzee (*Pan troglodytes*). There are five core schools in the target communities that are heavily supported by the project through programs that include environmental education, life skills, girl's support, nutrition, secondary and tertiary scholarships, staff training and support and construction of infrastructure, all of which improve the learning environment in these schools.

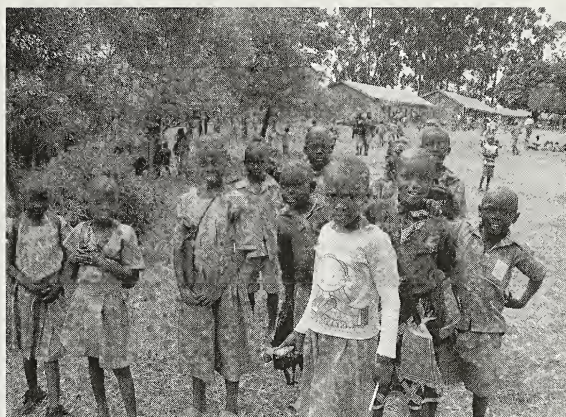
In addition to the core schools, nine more in the area are included in The Kasiisi Project Conservation Education Program which supports initiatives aimed at producing a generation of local committed conservationists. It is here that I saw the amazing impact that zoos can have on these kids' lives.

For two years, Disney World Conservation Fund has paid for teachers who have never seen elephants or hippos to take field trips to three local National Parks: Queen Elizabeth National Park for savannah animals, Kibale National Park for tracking chimpanzees and Semuliki National Park for central African birds and the amazing shoebill stork (*Balaeniceps rex*). Although these teachers live and work next to the park, most had never visited them. Their experience is shared with about 6000 students and evaluation data showed that both teachers and their pupils showed increased knowledge and appreciation of their environment as a result of the trips.

Brevard Zoo has donated soccer and netball uniforms, with chimpanzee logos designed by Columbus Zoo. Stuffed animal chimpanzees, and arts and crafts supplies for use by school Wildlife Clubs have also been a Brevard Zoo gift.

Cleveland Zoo is funding a water quality project where children from five Kasiisi Project schools will test water from a variety of sources both inside and outside the forest to study the impact of vegetation loss.

North Carolina Zoo is also involved in Kibale National Park. It has supported the research of Dr. Jeremiah Lwanga who studies chimpanzees and rainforest flora. Support for Dr. Lwanga comes from the donation box at the North Carolina Zoo chimpanzee exhibit. NCZ also promotes conservation education through their UNITE program in forest edge schools to the south of the park.



Students playing before school begins at
The Kasiisi Project model school.

(Photo by Amy Hanna)

I was invited to see the impact of zoo involvement in The Kasiisi Project's environmental programs when I met the project director last year at a conference and mentioned I would be moving to Uganda. Kibale National Park is a five- hour bus ride to the West of Kampala, the capital of Uganda where I live, and is certainly worth visiting and conserving.

I stayed for three nights in a research house with two other project managers who took me on walks in the forest. We ran into rare forest elephants (*Loxodonta cyclotis*), dung beetles (*Scarabaeoidea sp.*), red colobus monkeys (*Procolobus foai*), and L'hoest's monkeys (*Cercopithecus lhoesti*). There are 13 primate species in KNP, including 1400 chimpanzees, the highest primate biomass in East Africa. By the end of the trip, I was invited to volunteer as an educator to help strengthen the Wildlife Clubs in 14 forest-edge schools. I am very excited and grateful for this opportunity.

Ziwa Rhino Sanctuary **Uganda**

The Ziwa Rhino Sanctuary was established in 1997 as a safe breeding ground for white rhinos (*Ceratotherium simum*) and as an education opportunity to raise awareness and funds for the endangered species. Every day, tourists are allowed to hike with the guides on foot to see the rhinos in the bush. Along the way, the guides educate the tourists on rhino behavior and poaching.

I visited the park on the way to Murchison Falls, to the north of Kampala. I was immediately impressed with the infrastructure and organization of the project and its management. With starched uniforms, the guides are kind, knowledgeable, and dedicated. The two hour walk through the bush was unique and exhilarating, even when the rhinos and baby were snoozing in the grass.

The Brevard Zoo donates money to Ziwa's education department. In August 2006 two rhinos were donated by Disney's Animal Kingdom in Orlando Florida, along with many supplies, including tools and batteries.

Uganda Wildlife Education Center
Entebbe, Uganda

The UWEC is a wildlife sanctuary and zoo, accredited by PAAZAB--The African Association of Zoos and Aquaria. Like any other accredited zoo in the U.S., UWEC is an education center that strives to educate the public on appreciation and awareness of wildlife and the environment to promote conservation of species and sustainability. PAAZAB sees one of the primary functions of zoos and aquariums as healing the relationship between man, animal and their mutual environment.

I visited UWEC to get to know the park and to inquire about volunteer and job opportunities. Behind the scenes of the veterinary center, the Education Director showed me a large, quarantined area where they had just assisted in the confiscation of 300 grey parrots (*Psittacus erithacus*), from an illegal pet trade mission. UWEC's reptile area educates the public about the natural history of venomous snakes. One of the large constrictors is an advocate for education, used in the travelling zoo which visits schools in the Entebbe area. He also explained the story of two white rhinos donated to UWEC and the education programs dedicated to the species. UWEC also provides Wildlife Camp to children of all ages, which is a big hit.



Students pose for a group photo with their teachers and UWEC staff. (Photo by David Musingo, Education Director at UWEC)

to UWEC to enhance these programs. Wildlife Paradise Park also supports the lion (*Panthera leo*), exhibit and welfare of the animals, and helps to market UWEC in the UK.

The National Zoological Gardens of South Africa and Johannesburg Zoo in South Africa provides technical support to UWEC in terms of Conservation Education and Wildlife Welfare and Management. They have given support to the integration of PAAZAB's standard operating procedures to UWEC's programs, and supported the first climate change workshop for teachers at UWEC in 2010.

Mountain Gorilla Veterinary Project (MGVP)
Volcanoes National Park, Rwanda

Established in 1986, this project aims to save mountain gorillas (*Gorilla beringei beringei*) [and sometimes western and eastern lowland] by providing direct medical care to the wild population and monitoring the overall health and behavior of these populations.

The Maryland Zoo in Baltimore supports the offices and Internet of three key players for MGVP in Uganda, including the Director who is a wildlife vet and also consults at the zoo, an administrative

assistant, and a vet tech who also manages the bio bank at the zoo. The bio bank is used by gorilla researchers around the globe.

The Partners in Conservation (PIC), established in connection with Columbus Zoo in Ohio, funds the salaries of two African vets for MGVP. Jack Hanna, who was the Director Emeritus of the Columbus Zoo and Aquarium for 15 years, is on the board of MGVP.

Visiting the project was a treat. Rwanda is clean and beautiful. Due to fertile volcanic soil, farmland covers almost the entire country. There is a hard edge where farm meets National Park. MGVP is situated at the bottom of the volcanoes in a town called Ruhengeri. The MGVP compound was a nunnery and is in great condition with many offices and bedrooms and a functional kitchen. A typical drive to the edge of Volcanoes National Park is about 45 minutes, but the hikes up to the gorillas can be very steep and treacherous. The MGVP team is knowledgeable, fun to work with, and dedicated to the gorillas and the project.



Hiking through the rural areas up to the edge of
Volcanoes National Park.

(Photo by Amy Hanna)

****For more details on the full adventure, please check out Amy's blog at
<http://amydominafrica.blogspot.com>**

Zoo News Digest/Zoo Biology Group - Check Them Out!

Zoo NewsDigest is the longest established and most widely read listing of current 'zoo' related news on the Internet. It notes 'real' events of interest to those working within the zoo industry. The Digest also includes comments and notification of courses and coming events. You can check it out on its Facebook® page at <http://www.facebook.com/pages/ZooNews-Digest/41410063216?ref=nf>. Or check our <http://zoonewsdigest.blogspot.com/>

The Zoo Biology Group is concerned with all disciplines involved in the running of a Zoological Garden: captive breeding, husbandry, exhibit design and construction, diets, enrichment, management, record-keeping, etc. To join the Zoo Biology group see <http://groups.yahoo.com/group/zoo-biology> for qualifications and process.

Upcoming AZA National Conferences

Sept. 12-17, 2011 - AZA 2011 Annual Conference - Hosted by Zoo Atlanta, Atlanta, GA

Sept. 8-13, 2012 - AZA 2012 Annual Conference - Hosted by Phoenix Zoo, Phoenix, AZ

Sept. 7-12, 2013 - AZA 2013 Annual Conference - Hosted by Kansas City Zoo, Kansas City, MO

For info on AZA Conferences, see http://aza.org/ConfWork/AC_Intro/index.html

Conservation/Legislative Update

Column Coordinators: Becky Richendollar, North Carolina Zoo
and Greg McKinney, Philadelphia PA

This month's column was put together by
column co-coordinator Becky Richendollar



Study Findings Urge Zoos to Do More - A recent study published in the journal *Science* found that only one in seven land vertebrate species that are threatened in the wild exist in captivity. Using data from the International Species Information System (ISIS), the researchers concluded that only 20-25% of all endangered mammal species are kept in zoos. While the avian figure is only slightly less than that number, only 3% of threatened amphibian species live in captivity.

The authors state, "while it is true that the number of endangered species and individuals at any one zoo is small, if several institutions link up, zoological gardens will have a considerable collective potential to breed endangered animal species." They go on to say that zoos need to become more specialized, focused on breeding only a few species so that they can improve their success.



Black-footed ferret
(Photo by USFWS)

The International Union for Conservation of Nature (IUCN) also recently examined the contribution of zoos in aiding endangered animals. Of the 68 vertebrate species that the IUCN has downlisted over the years, 17 were influenced by breeding at zoos. Among these are the black-footed ferret (*Mustela nigripes*), the California condor (*Gymnogyps californianus*), and the Przewalski's Horse (*Equus ferus przewalskii*).

The *Science* article goes on to say that zoos are playing a valuable role in information collection. Information such as age of sexual maturity, litter size, and interbirth intervals of various species is important in allowing scientists to calculate the decline of wild animal populations. Source: *Evoscience*, March 30, 2011

Scientists Say Data Confirm Warming Trend - After reviewing decades of data, scientists have reported to the U.S. House of Representatives that evidence of global warming does exist. The scientists involved in the Berkeley Earth Surface Temperature Study found that there has been a rise of .7 degrees Celsius (1.3°F) since 1957. This finding is consistent with independent analyses by NASA, the National Oceanic and Atmospheric Administration and the U.K. Hadley Centre.

Study chairman Richard Muller, a physicist at Lawrence Berkeley National Laboratory said, "The world temperature data has sufficient integrity to be used to determine temperature trends." Muller testified before the House Science, Space, and Technology Committee about the study's findings. This testimony comes as climate skeptics continue to claim that temperature data collected at weather stations around the world is false. The Berkeley study, which is funded by a nonprofit group, aims to create a new, less controversial analysis of weather data. Source: *Greenwire*, March 31, 2011

Bureau of Land Management Responds to Public Pressure - For years, the Bureau of Land Management (BLM) has managed populations of wild horses and burros by annual mass round-ups to remove the excess animals. The BLM currently manages roughly 38,000 of these animals in 10 western states, and houses an additional 40,000 in corrals and long-term pastures. The public protested against the round-ups after a video clip on the Internet showed a helicopter chasing down a young mare during one event. The public outcry pushed the BLM to examine their policies.

A new management strategy was announced in mid-March. The strategy calls for an increase in contraceptive measures for the animals, more humane treatment of the animals during capture, and an emphasis on the horse and burro adoption program. Specifically, the round-up will be decreased in size from 10,000 to 7,000 animals; contraception will be given to 2,000 mares as opposed to the old number of 500. In addition, the goal for wild horse adoption is over 4,000 horses annually. *Source: Greenwire, March 24, 2011*

Earth Hour Celebrated in 134 Countries - On March 26, 2011 at 8:30 pm local time millions of people around the world turned off the lights on climate change. For 60 minutes countries around the world celebrated “Earth Hour” in which individuals are asked to turn off their lights as they think about climate change and pledge to change their energy consumption habits.

The event, which began in 2007 by the World Wildlife Fund in Sydney, Australia, saw participation from 134 countries on all seven continents this year. Around the world the lights went out, including at monuments such as the Eiffel Tower in Paris, the Empire State building in New York, the Sydney Opera House, the London Eye, and the Burj Khalifa in Dubai.

Earth hour co-founder Andy Ridley said, “We didn’t imagine right at the beginning... it would be on the scale that it is now.”

For more information about how you can go “beyond the hour” visit www.earthhour.org/ *Source: Discovery News, March 27, 2011*

British Lawmakers Work to Ban Circus Animals - Environment Secretary Caroline Spelman is said to have been convinced that keeping wild animals in circuses is a practice that needs to be stopped. Sources say Spelman is concerned that keeping elephants, tigers, lions, camels, and other exotic animals in a circus environment is harmful to their welfare.

Officials at the Department for Environment, Food and Rural Affairs are working on the final details of the measure, trying to ensure that there isn’t a conflict with current European legislation. This move comes a week after undercover footage showing a groom at the Bobby Roberts circus being a 59-year-old Asian elephant with a pitchfork and kicking her. The elephant, named Anne, is severely arthritic and has been removed from the circus to be housed at the Longleat Safari Park in Wiltshire.

Under current law, travelling circuses have to comply with Animal Welfare Act guidelines. The circuses are excluded from the tougher cruelty and welfare laws that apply to zoos. *Source: express.co.uk, April 4, 2011*

Mountain Gorillas Succumb to Human Disease - New research published in the journal *Emerging Infectious Diseases* shows that mountain gorillas (*Gorilla beringei beringei*) are being affected by human illness. The study found that respiratory disease is on the rise in this fragile population of animals and that respiratory disease is now the number two cause of death in mountain gorillas.



Mountain Gorilla in Rewanda
(Photo by Cryptomundo.com)

It appears that at least some of the respiratory diseases are being transmitted to the animals by humans. A 2009 outbreak in Rwanda left a family group of 12 infected. Doctors from the Mountain Gorilla Veterinary Project treated the animals with antimicrobial drugs but two of the animals – an adult female and a three day old infant - went untreated and died. Tissue analysis of the dead gorillas found the culprit: an RNA virus called human metapneumovirus (HMPV). The specific strain of the virus found in the gorillas is found in South Africa, although officials have not been able to pinpoint which human brought the disease in to the population.

The paper goes on to say that precautions are taken to protect the animals from human disease.

"The Rwandan, Ugandan, and Congolese governments restrict tourist numbers and proximity, and the Congolese wildlife authority mandates that masks be worn by persons visiting gorillas." This new study shows that these precautions may not be enough to protect the mountain gorillas. *Source: Scientific American, March 29, 2011*

Scientists Urge Politicians to Use Science, Not Politics - Nearly 1,300 scientists in the United States sent a letter to each and every U.S. Senator in early April urging them to stop political agendas from obscuring scientific knowledge. "As scientists with expertise in biological systems," the letter reads, "we are writing to urge you to vote against any legislation that would undercut the use of best available science as the basis for adding or removing any particular species from the protection of the Endangered Species Act."

The letter, which was signed by scientists from all 50 states, the District of Columbia, and two U.S. territories, comes after recent moves to remove the gray wolf (*Canis lupis*) from the Endangered Species list.

"If any one species is taken off the endangered species list by Congress, then all of the species on the list become vulnerable to future political attacks," said wildlife ecologist Franz Camenzind, one of the signatories, in a prepared statement. "This would send the implementation of the Endangered Species Act into chaos, creating uncertainty both for species and for the communities and businesses around them."

Other attempts to legislate endangered species based on political decisions include a bill from Rep. Joe Baca (D-Calif.) that would limit Endangered Species Act (ESA) protection to 15 years, a period in which species could either recover or on its expiration no longer be safeguarded; legislation from Rep. Don Young (R-Alaska) to remove from the ESA; and spending bills in both houses of Congress to end water-use restrictions put in place to protect endangered species in the Sacramento. In addition, the U.S. House of Representatives has proposed large cuts to several conservation organizations including the Land and Water Conservation Fund and the Clean Water Act. *Source: Scientific American, April 1, 2011*

Germany Mourns Loss of Knut - Knut, the polar (*Ursus maritimus*) bear that became famous after his mother rejected him four years ago, has lost his life at a young age. Among much controversy, the Berlin Zoo decided to hand raise Knut in 2007. The polar bear cub quickly gained worldwide popularity.



A reproduction of a special stamp honoring Knut in 2008 (Photo: Gero Brelor/European Pressphoto Agency)

In late March, as horrified zoo visitors looked on, Knut stumbled and fell into the pool in his enclosure where he died. The immediate cause of death according to the necropsy was drowning. However additional findings showed that Knut suffered from encephalitis, an inflammation of the brain, which caused him to collapse and fall in to the pool. Zoo officials confirm that Knut would have likely died from the swelling in his brain if he had not drowned.

Controversy is continuing to surround Knut as the public has reacted to the zoo's wish to donate the body to Berlin's Natural History Museum. While the public is vehemently opposed to the idea, zoo officials wish to continue to use Knut as an educational tool. The zoo gives many of its deceased animals to the museum for education and research purposes. *Source: Discovery News, April 1, 2011*

AAZK Membership Application (Please Print)

Check here if renewal []

Name _____

Email _____

Mailing Address _____

City _____ State/Province _____ Zip/Postal Code _____ Country _____

U.S. Members*

☐

\$45.00 Professional

Full-time Keeper

☐

\$40.00 Affiliate

Other staff & volunteers

☐

\$30.00 Student

Must supply copy of current student ID at time of application

☐

**\$70.00 or up - Individuals
Contributing/U.S.**

☐

\$150.00 or up

Institutional/U.S.

*Organizations/Institutions
(requires Board approval)*

☐

\$150.00 Commercial Member
(i.e. animal-related food & supplies)

☐

\$60.00 International Members *(All members outside U.S. & Canada regardless of category)*

Canadian Members*

☐

\$45.00 Professional

Full-time Keeper

☐

\$40.00 Affiliate

Other staff & volunteers

☐

\$30.00 Student

Must supply copy of current student ID at time of application

☐

**\$70.00 or up - Individuals
Contributing/Canada**

☐

\$150.00 or up

Institutional/Canada

*Organizations/Institutions
(requires Board approval)*

☐

\$45.00 Library Only

Available ONLY to public & university libraries (In U.S.)

Zoo Affiliation (if any) _____

Zoo Address _____

Title _____

☐

My check is enclosed (AAZK, Inc.)

☐

Please charge my credit card

Mastercard Visa Card# _____ - _____ - _____

Name on card _____ Expiration date _____

Signature _____

Mail this application to: AAZK Administrative Offices, 3601 SW 29th St., Suite 133, Topeka, KS 66614-2054. Make checks/money orders payable to AAZK, Inc. **Must be in U.S. FUNDS ONLY**. Membership includes a subscription to *Animal Keepers' Forum*. The membership card is good for free or discounted admission to many zoos and aquariums in the U.S. and Canada.



**AMERICAN
ASSOCIATION
of ZOO KEEPERS**

*"Dedicated to
Professional Animal Care"*

**3601 S.W. 29th St.
Suite 133
Topeka, KS
66614-2054
U.S.A.**

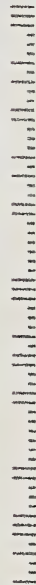
Return Service Requested

Non-Profit Organization
U.S. POSTAGE PAID
Topeka, KS
Permit # 646



3 9088 01607 3553

*****MIXED AADC 500
4/12 CRP 1
SMITHSONIAN INSTITUTION LIBRARY 5
NHE 25 REC 154
PO BOX 37012
WASHINGTON DC 20013-7012



Animal Keepers' Forum
37th Anniversary
1974 - 2011